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WHOLE NUMBER 380
DEPARTMENT OF THE INTERIOR BUREAU OF EDUCATION

ON THE TRAINING OF PERSONS TO TEACH AGRICULTURE IN THE PUBLIC SCHOOLS

By LIBERTY HYDE BAILEY

DIRECTOR OF THE
NEW YORK STATE COLLEGE OF AGRICULTURE
AT CORNELL UNIVERSITY



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ABSTRACTS

LETTER OF TRANSMITTAL

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
WASHINGTON, D. C., *February 13, 1908.*

SIR: I have the honor to transmit herewith a manuscript entitled "On the Training of Persons to Teach Agriculture in the Public Schools," and to recommend its publication as the first number of the bulletin of the Bureau of Education for the year 1908.

By the so-called Nelson amendment to the agricultural appropriation bill for the year 1908 the sum of \$5,000 was added to the appropriation to each of the States for the better endowment and support of the agricultural and mechanical colleges which had been previously endowed and aided under the two Morrill acts, of July 2, 1862, and August 30, 1890; and it was provided that this addition should be increased by the sum of \$5,000 annually till it should reach the annual amount of \$25,000. When this maximum is reached, at the end of a five-year period, each State will receive annually, including the \$25,000 previously granted under the second Morrill Act, a total of \$50,000 for agricultural and mechanical college purposes.

With these liberal endowments and the still larger amounts appropriated by the State governments the "land-grant colleges" have been able to give a great impetus to agricultural education. They have helped to form the rising demand for a wide extension of such education in high schools, normal schools, and schools of elementary grade.

As was pointed out in the report of the Commissioner of Education for the year 1906, there is grave danger that the demand for the teaching of agricultural subjects shall far outrun the supply of properly qualified teachers. Such a mischance might result in a serious setback to a great educational movement—one of the most promising educational movements, in fact, of the present generation. It is accordingly significant that the Nelson amendment contained the following provision: "That said colleges may use a portion of this money for providing courses for the special preparation of instructors for teaching the elements of agriculture and the mechanic arts."

The Bureau of Education bears some responsibility in this matter, since the Department of the Interior is charged with the distribu-

tion of the annual appropriations under both the second Morrill Act and the Nelson amendment, and this Bureau is the agency through which that function is discharged. With a view to rendering some assistance in the shaping of plans for such training of teachers as may be undertaken by the colleges with the aid of these new funds, I have asked Prof. Liberty Hyde Bailey, director of the New York State College of Agriculture at Cornell University, to prepare the bulletin which is presented herewith. Professor Bailey is among the foremost of those who are making the new movements in agricultural education, and his suggestions will have value and interest, not only for the authorities controlling the agricultural and mechanical colleges, but also for all who are interested in these new educational undertakings.

Very respectfully,

ELMER ELLSWORTH BROWN,
Commissioner.

The SECRETARY OF THE INTERIOR.

INTRODUCTORY NOTE.

The most significant contemporaneous movement in education is the effort to adapt the work of schools directly to the lives of the pupils. It is the expression of the effort to make the school training applicable. The normal activities of the child are to be directed and trained in such a way that real education will result therefrom. Education will grow out of the child's experience, rather than be imposed on him.

If this is to be the motive of popular education, then agricultural and industrial subjects will be made more and more a means of school work. It is therefore a question of the first importance how to organize these subjects into an educational harmony. The agricultural subjects are specially difficult of organization, because they are so many and so diverse and so unlike in different regions. The character and success of the teaching of these subjects lie immediately with the teacher; there have been no institutions consciously to train teachers for such work; therefore it is not strange that many educators should consider the training of persons to teach agricultural subjects to be the most important educational question now before us.

ON THE TRAINING OF PERSONS TO TEACH AGRICULTURE IN THE PUBLIC SCHOOLS.

PART I.—THE NATURE OF THE PROBLEM.

It is first necessary to understand that the training of teachers for the teaching of agriculture in the public schools is not a simple or a single question. The training of teachers for the group of subjects embraced under the term "agriculture" can not be isolated from other training. It is not alone a question of giving the teachers the necessary technical knowledge and skill in agricultural subjects, but also of providing training and experience in methods of teaching, and in developing a point of view and a right estimate of education in general. There is great danger in the technical teaching of agriculture, even though it be well taught, if the teacher is not also well grounded in the social and pedagogical principles and problems involved in all education; and any such irrelevant or unrelated teaching will in the end react disastrously on the very movement that it is intended to promote.

The subject before us is not single in respect to the kinds or grades of schools that are involved in the discussion, the constitution or body of the subject-matter itself, or the nature of the sentiment that lies behind the movement for agriculture in the schools.

In the training of teachers it is necessary at once to know the kind of teaching that the prospective teachers are expected to undertake. With the widespread and unorganized interest in agricultural education it is impossible to make any definite classification, but we may roughly throw the schools in which the teaching of the subject is in question into three groups—the elementary schools, the high schools, and various kinds of special schools.

(1).—ELEMENTARY SCHOOLS.

We first consider elementary teaching of all kinds, meaning, in general, such range of work as is comprised in the first eight grades of a graded school system, or work in ungraded schools that is not more advanced than this. In this group the difficulties are the greatest. The group includes most of the so-called rural schools, the greater part of which are not graded to any extent, in some regions not at all.

These rural schools are most closely in contact with real agricultural needs, and it is in them that many persons seem to expect the quickest and best results from the teaching of agriculture; yet they are beset with very special difficulties, and we shall need to discuss them at some length. We may take this opportunity, also, to discuss some of the principles involved in rural school education.

The first thing that needs to be done with the rural elementary schools—the so-called district schools—is to redirect them and vitalize them, rather than merely to introduce agriculture as such. It is not unlikely, however, that this very agitation for the teaching of agriculture is to be the means of starting the reorganization. The demand for the introduction of agriculture is in reality the concrete expression of a desire to make the schools mean something real and tangible to the pupil, to relate them to his life and environment. The effort to accomplish this has recurred strongly at different epochs for at least one hundred years. Recorded discussions of fifty and seventy-five years ago read much like those of to-day. It is probable, however, that we have now arrived at a time when the agitation will produce concrete organizational results. Education by means of agriculture is but a phase of industrial education.

The special difficulties or handicaps of the rural elementary schools are such as these: Teaching in them is not recognized as a profession, but is undertaken as a preparation for other teaching or as a means of temporary employment, and the qualifications are low; teachers' pay is small; tenure of teaching is short, so that there is lack of continuity of effort; one teacher must handle all subjects in most cases; the school year is usually short; attendance is small and irregular; equipment, even in land, is practically nothing; the constituency is conservative and often even uninterested; supervision is slight, and usually not of a constructive or progressive nature. The whole scale of maintenance and organization is low.

In spite of all these disadvantages, however, the rural elementary school has useful characteristics that must not be overlooked, and that should not be lost. Some persons look for the practical abolition of this type of school, usually planning for it an evolution into a system of consolidated centers after the manner of city-school consolidation. It is a question, however, whether we are not likely to place relatively too much emphasis on the establishing of new institutions, whereas the greatest effectiveness and even the quickest results may probably be attained by utilizing agencies already in existence. It is easy, for example, to ridicule the country school, and then to plead for new isolated schools in which to teach agriculture; but in so doing we may forget that isolated special schools can not serve all the people, and that they also tend to isolate the subject. The present rural schools, with all their shortcomings, are good schools because

(1) they are already in existence; (2) they are the schools of all the people; (3) they are small, and thereby likely to be native and simple; (4) they are many, and therefore close to the actual conditions of the people. We should utilize them to the fullest by improving and re-directing them; and in the end these schools, when redirected, will present the fundamental solution of the problem of rural education. In the discussion of this question, we must not make the mistake of thinking of the welfare of the school alone. The open country needs more local centers of life and influence rather than fewer. It is a debatable question whether the best social life is to be secured by any general consolidation of schools that will make large and far-apart units.

The arguments in favor of consolidation are many and important. By consolidation, stronger teaching units are secured; more money is available for the employing of teachers and the providing of equipment; special subjects can be given adequate attention. The objections are many, but most of those commonly urged are trivial and temporary. The greatest difficulty in bringing about the consolidation of schools is a deep-seated prejudice against giving up the old schools. This prejudice is usually not expressed in words. Often it is really unconscious to the person himself. Yet right here may lie a fundamental and valid reason against the uniform consolidation of rural schools—a feeling that when the school leaves the locality something vital has gone out of the neighborhood. Local pride has been offended. Initiative has been removed one step further away. The locality has lost something. It is a question, even, whether the annual school meeting is to be lightly surrendered, whether it is not worth keeping as an arena for the clearing of local differences, and as a possible nucleus of a useful institution. By every legitimate means we should develop and fix local attachments. We have almost come to be a nation of wanderers and shifters. We are in danger of losing some of our affection for particular pieces of land. Farming is a local business. It develops into great effectiveness only when local feeling is strong. The State also needs the conservatism and steadiness born of this local interest.

Much of the impulse for the consolidation of schools, as already intimated, is a reflection of the centralized city graded school; but it is by no means certain that such institutions are to be the most important or dominating schools of the future. The small rural school, with its weaknesses, has the tremendous advantage of directness and simplicity. It is doubtful whether it would be improved by a rigid system of grading. It is a question, in fact, whether the graded schools do not still carry the onus of proving themselves. Unquestionably consolidation of rural schools is often advantageous, and is to be advised whenever it seems to be necessary for pedagogical

reasons. In some regions it may be a necessity. It is often urged for financial reasons; but this in the long run is not reason enough. We maintain our canals and Government work at public expense. The State must cooperate in the maintenance of its detached schools, by direct appropriations, if necessary, to their localities, always on the condition, however, that all effective control does not pass out of the community. Consolidation of schools is much more than a school question. It touches the very quick of local pride and progress.

There is every reason to expect that consolidation of rural schools will proceed, and with benefit. The point is that it should come naturally and that it should not necessarily be expected to operate advantageously everywhere. It should come as a result of conditions, and should not be forced independently of conditions. It will undoubtedly be found that some districts will be better off without consolidated schools. There is no reason in the nature of education why both separate and consolidated schools may not each render service that the other can not render. It will be unfortunate if the question of consolidation of schools falls into the hands of advocates or partisans. The social welfare of the community, as well as the school work, must be considered in every case.

The rural elementary school will be redirected by making it a natural expression of the community of which it is or ought to be a part. Education should develop out of daily experience. It is not necessary to have an entirely new curriculum in order to redirect the rural school. If geography is taught, let it be taught in terms of the environment. Geography deals with the surface of the earth. It may well concern itself at first with the school grounds, the highways, the fields and what grows in them, the forests, hills, and streams, the hamlet, the people and their affairs. As the pupil grows, he is introduced to the world activities. Similar remarks may be made for arithmetic, reading, and all the other customary work of the school. This is much more than what is now meant by "correlation." The problem of the rural school is not so much one of subjects as of methods of teaching. The best part of any school is its spirit; a school can be conceived in which no agriculture is taught separately, which may still present the subject vitally from day to day by means of the customary studies and exercises. The agricultural colleges, for example, have all along made the mistake of trying to make farmers of their students by compelling them to take certain "practical" courses, forgetting that the spirit and method of the institution are what make the work vital and what send the youth back to the land. The whole enterprise of elementary schooling needs to be developed natively and from a new point of view; for in an agricultural country agriculture should be as much a part of the school as oxygen is a part of the air. We should not isolate

agriculture from the environment of life in order to teach it; we should teach the entire environment.

If the foregoing points are well taken, we then see that the problem of training teachers to teach agriculture in elementary schools is much more than providing them with an equipment of agricultural subject-matter. Here and there the special teacher of agriculture will be needed in elementary work, as in certain consolidated rural schools, and in well-graded city or village schools. Now and then teachers will be needed to supervise the work in agriculture in several related schools; but experience will probably demonstrate that in most cases this will be only a temporary means of handling the subject, in order to organize it and to start it.

It is not alone a new kind of teacher that the rural elementary school needs, and no rural school constituency should be allowed to feel that emphasis should be put on teachers alone. In fact, the kind of teacher is usually an expression and result of the type of effort that exists in the district. The school is worth no more than the district pays for it. The same is true of a horse or a plow or a farm. The rural school premises are often unattractive or even repulsive. No work with spirit in it is likely to be accomplished under such conditions. Moreover, there is no equipment in most of these schools; and teaching can not, any more than farming, be well accomplished without facilities and appliances.

The school building is first to be considered. From Maine to Minnesota one will see in the open country practically one kind of schoolhouse, and this the kind in which our fathers went to school. There is nothing about it to suggest the activities of the community or to attract children. Standing in an agricultural country, it is scant of land and bare of trees. If a room or wing were added to every rural schoolhouse to which children could take their collections or in which they could do work with their hands, it would start a revolution in the ideals of country-school teaching, even with our present school-teachers. Such a room would challenge every person in the community. They would want to know what relation hand training and nature study and similar activities bear to teaching. Such a room would ask a hundred questions every day. The teacher could not refuse to try to answer them. A room of this kind, containing perhaps a plow and a few agricultural implements, would itself constitute one of the means of training teachers.

Eventually, the entire school will partake of the informal character that is suggested by the single workroom. The pupil will be allowed to express himself; and it will be the part of the teacher to direct and shape this expression to the best educational ends. Unless the elementary-school teacher has some such outlook as this, his teaching of agriculture is likely to impose another task on the child.

We may next consider the equipment of land. A good part of all our laboratories should be out of doors. In the argument for separated rural schools, one is struck with the plea that good laboratories may be secured. A good part of this argument comes from college men. It does not at all follow that our four-wall laboratory methods are as useful for the elementary schools as for colleges and high schools. In fact, it is a question whether much of our college laboratory work is really worth the while as compared with good natural field work under the conditions that are everywhere at hand. The school land may be used for plantations of trees and shrubs, for school gardens, for experimental plats, and utilized as an arena of the natural wild life of the neighborhood. Equipment of land should go far toward developing a really effective nature teaching, redirecting some of our present laboratory methods. Laboratory teaching may be pedagogically just as incorrect as book teaching. If the school is fairly well equipped outside and inside, a good part of the difficulty of securing teachers will subside; for the good places naturally attract the good teachers.

It is well to consider briefly what may be taught in the elementary school, whether a town school or a country ungraded school. In some cases separate classes in agriculture may be organized, but in most cases the work for the present must be incidental to other teaching. In any event, the content of the agricultural work must be carefully considered, for this will have direct relation to the training of the teacher. The main effort of primary and elementary teaching, so far as the agricultural phase is concerned, should be to put the pupil in touch with himself and his environment. Before the sixth grade, or its equivalent, there should probably be no agriculture as such. Generalized nature study should here control the work. This will underlie and prepare for all future work. It will be a mistake to try to force formal technical agricultural work in any grade below the high school.

Every teacher should understand that the term "nature study" is a misnomer. It does not stand for a "study." It is not a subject. It is not a "method," as this term is understood by teachers. It is an attitude, a purpose, a point of view, a mode of education. It is spirit. It is a fundamental educational intention, inasmuch as nature is the condition of our existence and as it is our duty to live in effective harmony with our conditions. Its underlying principle is one—to teach the things that are near at hand and that are naturally a part of the child's environment and activities, and to teach these things for the sake of the child, rather than to promulgate a subject. It will be seen, therefore, that no good subsequent teaching of agriculture is possible without the nature-study training.

The nature-study process and point of view should be a part of the work of all schools, because schools train persons to live. Particularly should it be a part of rural schools, because the nature environment is the controlling condition for all persons who live on the land. There is no effective living in the open country unless the mind is sensitive to the objects and phenomena of the open country; and no thoroughly good farming is possible without this same knowledge and outlook. Good farmers are good naturalists. It would be incorrect to begin first with the specific agricultural phases of the environment, for the agricultural phase (as any other special phase) needs a foundation and a base; it is only one part of a point of view. Moreover, to begin with a discussion of the so-called "useful" or "practical" objects, as many advise, would be to teach falsely, for, as these objects are only part of the environment, to single them out and neglect the other subjects would result in a partial and untrue outlook to nature; in fact, it is just this partial and prejudiced outlook that we need to correct.

We must have it in mind that the common elementary schools do not teach trades and professions. We do not approach the subject primarily from an occupational point of view, but from the educational and spiritual; that is, the man should know his work and his environment. The mere giving of information about agricultural objects and practices can have very little good result with children. The spirit is worth more than the letter. Some of the hard and dry tracts on farming would only add one more task to the teacher and the pupil if they were introduced into the school, making the new subject in time as distasteful as physiology and grammar often are. In this new agricultural work we need to be exceedingly careful that we do not go too far, and that we do not lose our sense of relationships and values. Introducing the word agriculture into the scheme of studies means very little; what is taught, and particularly how it is taught, are of the greatest moment. It is to be hoped that no country-life teaching will be so narrow as to put only technical farm subjects before the pupil.

We need also to be careful not to introduce subjects merely because practical grown-up farmers think that the subjects are useful and therefore should be taught. Farming is one thing and teaching is another. What appeals to the man may not appeal to the child. What is most useful to the man may or may not be most useful in training the mind of a pupil in school. The teacher, as well as the farmer, must always be consulted in respect both to the content and the method of agricultural teaching. We must always be alert to see that the work has living interest to the pupil rather than to grown ups, and to be on guard that it does not become lifeless.

Probably the greatest mistake that any teacher makes is in supposing that what is interesting to him is therefore interesting to his pupils.

In a rural community all the surroundings and customary activities should find expression in the school, as a means of putting the pupil into touch and sympathy with his environment: (1) The natural objects in the region and the character of the country; (2) the means by which people in the community live; (3) the household, or domestic affairs; (4) civic affairs, or the way in which human activities are organized and governed. All this is nature study in its best and broadest sense. These subjects may be taught in separate periods or classes; but the fundamental means is a complete redirection of the school activities so that vital and experience work will be a very part of the school life and dominate it. This redirecting of school-teaching, in both country and city, is taking place at the present time, although silently and unobtrusively.

As the child matures, nature-study work may become more concrete. In grades 6 to 8, it may be nature-study agriculture, perhaps following the suggested outline of the Report of the Committee on Industrial Education in Schools for Rural Communities to the National Council of Education, July, 1905 (pp. 44-45):

After the explicit nature study ceases with the fifth grade, the pupil in the rural school may then be taken through the elements of agriculture in the sixth, seventh, and eighth grades. The work in these three grades should really be nature study, but agricultural subjects are the means. Some will prefer to call it nature study rather than agriculture. Its purpose is not so much to teach definite science as to bring the pupil into relation with the objects and affairs that are concerned with the agriculture of his region. When the pupil has completed his nature study in the fifth grade, he should have a good knowledge of the physiography of his region, and of the common animals and plants. He will then be able to carry his inquiries into the more specific field of the agricultural practice and operations. When he has completed his eighth year, he should have a well-developed sympathy with agricultural affairs and he should have a broad, general view of them. Entering the high school, he will then be able to take up some of the subjects in their distinctly scientific phases.

The general plan recommended by the committee is as follows: Sixth year, first half, the affairs of agriculture; second half, the soil; seventh year, farming schemes and crops; eighth year, animals.

If the agricultural work in the grammar grades is to be of the nature-study kind and not of the science kind, it can then cover a somewhat wide range. In these grades, the pupil should not be put into "agronomy," "economics," and other technical subjects, but he should be brought into relation with his agricultural environment.

A statement is now given of what is actually accomplished in a one-teacher district school in New York, where special classes can not be organized. The teacher has been successful in interesting his pupils in various experiments and tests that have relation to farming. He gives all the pupils nature-study work, including the younger ones. Suggestions are had from books, from the State syl-

labus, and perhaps quite as frequently from something that happens for the time to be interesting the school or the community. He is introducing practical local problems into the arithmetic work. He suggests that if ten or twenty-five schools could work together in harmony in arithmetic, geography, and other subjects, thereby making it worth while for examination questions to be asked on these new lines of work, the results would be very marked. Some of the problems that have been more or less used are as follows (as expressed by the teacher himself, Mr. H. H. Lyon) :

Air:

Test for moisture.

Test for carbonic acid gas. (Limewater, etc.)

Tests for ammonia. (In schoolroom and in cow stables.)

Seeds:

Germination. (Find per cent, etc.)

Manner of growth. (Monocotyledons, dicotyledons.)

Plants:

Water taken from soil. (Use scales.)

Transpiration. (Collect H_2O .)

Examination of nodules on leguminous plants.

Effect of nodules on luxuriance of growth.

Soils:

Search for water-table—different places and times.

Test with litmus paper.

Effect of lime or ashes on clay soil.

Effect of lime on clear and on muddy water.

Correct acidity with lime or ashes. (Result observed in growth of clover.)

Capillarity under different conditions.

Milk:

Babcock test.

Drill in making measurements, reading bottles, computations.

Test acid with acidometer.

Acid test.

Correct measurements, computations of acid.

Milk at different ages.

Under different conditions of cleanliness and temperature.

Bottle and cork tight; keep warm; observe odor; use different samples to compare.

Water:

Test for organic matter.

Bottle with a little sugar; keep warm; observe color, etc.

Use potassium permanganate.

Osmosis:

Using egg.

Using bladder.

Fungicides:

Formaldehyde for oats smut.

Hot water for oats smut.

Bordeaux for potato blight. (Use ferrocyanide test.)

Computations in each case.

Chemical action:

Caustic soda solution plus muriatic acid.

Evaporate; find the salt.

(Can teach chemical formula of this even at 10 or 12 years.)

Commercial fertilizers:

Handling and mixing—Nitrate of soda, muriate of potash, and dissolved rock. (Computations.)

Cows:

Dairy type. (Examine form, milk veins, hide, etc.)

Beef type.

Weather map:

Receive daily maps and determine location of storm center.

Physical experiments of various kinds taken from books on physics. Make suction pump with lamp chimney, etc.

Garden:

A grass plot has been substituted for the school garden, where farm grasses, fertilizers, and seeding may be studied.

It will be seen from a careful consideration of the foregoing discussions that much very good agricultural work can be introduced into the ordinary elementary school that is teaching the usual State syllabus. It can be taught as a part of geography and arithmetic and manual training and reading, as well as in the regular nature-study intervals; and it is not difficult to send a pupil home with a desire to attack some of the problems at the house, on the farm, and in the garden. The Report of the Committee on Industrial Education in Schools for Rural Communities denies the charge that the poor teaching in the common branches is attributable to lack of time, for the poor results are "not due to lack of time on the part of pupils so much as to poor teaching and lack of proper organization;" and also asserts that the poor results attributed to the overcrowding of the course of study are "not due to the number of subjects, but to the attempt to teach too many things in these subjects which are not worth teaching."

(2).—HIGH SCHOOLS.

The question of the teaching of agriculture in the high school is much simpler than the problem in the elementary school. The pupil now arrives at an age when he may begin in some slight degree to choose and to specialize. The school is organized and supervised. Teachers are provided for special subjects. Apparatus is more likely to be supplied.

On the other hand, the high school is more rigid and crystallized. It is usually in town and has no immediate contact with land. It is further removed from direct agricultural influence.

The content of agricultural work in the high school is not yet determined with any definiteness, although very explicit courses of study have been recommended and even adopted. It will require

some years to work the enterprise out satisfactorily. Yet the teacher who is preparing for high-school work in agriculture has a fairly definite and limited field, and can prepare himself concretely. The field is essentially a natural-science field. The high-school teacher of agriculture should be as well grounded in the science and practice of his subject as the teacher of physics or chemistry or botany is in his field. He should, in fact, have a deeper and broader training, since he must use physics, chemistry, botany, and the like, in his special agricultural work. For many years to come the natural-science teacher will probably be obliged to handle the agricultural work in many high schools that introduce the subject.

The teaching of physics, chemistry, and the other natural sciences would probably better be separate from the teaching of agriculture, as schools are now organized, and constitute a science foundation for the agriculture. The alternative is stated as follows by the Committee on Industrial Education in Schools for Rural Communities (p. 45) :

If the high school has no adequate course in biology, then the student can be given a good drill in botany and zoology with particular reference to its agricultural relation, and this might be called "agriculture;" but it would be better if the student could have his fundamental training in biology in the first year of his high school and let him take his agricultural science thereafter. The agricultural work in the high school should have a distinctly scientific value. It should be such as would count toward science entrance requirements in case the student should desire to enter an agricultural college.

The point is that the natural sciences are essential; whether they shall be taught as a part of the agriculture or developed in the school preceding the agriculture, is at present a local or special question. We may hope that eventually the teaching of the natural sciences may be so vital and applicable that these sciences may constitute a part of a real course in agriculture.

One of the most hopeful recent movements for secondary agriculture teaching is the introduction of unit courses in biology, whereby an effort is to be made to give the high school pupil a real conception of the processes of life, rather than a fragmentary view of parts of the subject here and there. Everything will depend on whether this teaching can escape from the text-book drudgery and the old four-wall laboratory method. Agricultural subjects are alive and they are out of doors; it is for this reason that many persons are looking to the introduction of these subjects to be a quickening agency in the schools.

Having had biology and some of the elements of physics and chemistry, the pupil then comes to his agriculture; and the teacher wants to know what this agriculture is to be. No one is prepared yet to say just what it shall be. Some of the schemes that have been prepared are so extended and so minutely divided that no teacher can hope to

cover them except by the text-book and recitation method. They seem to be conceived on the type of the present formal text and laboratory work in natural science. It has been the habit to say that the nature-study point of view is advantageous chiefly in the elementary schools, but it is equally needed in the high schools and even in the colleges.

Whether taught formally or informally, the work that the teacher must be prepared on embraces the actual problems of agriculture: The structure and composition of soils and their reactions to natural agencies, the operations of tillage, the reasons and practices underlying the growth and the improvement of plants, the raising and handling of crops, the rearing and improvement of animals, the care and feeding of animals, the marketing of crop and animal products, the diseases, pests, and handicaps of crop growing and stock growing, the use of farm machinery, the making and keeping of the home, the economic and social phases of the farmer's business and life.

Within this range is more subject-matter than any school can cover; but the teacher must know the field in its educational applications, and be able to segregate from it such parts as will make a useful course for any given place or given length of time. Two modes are open to the teacher in organizing such work: (1) To work on problems, choosing those that are applicable in the community, as the growing of corn or cotton, the making of butter, the raising of hay, the growing of fruit; or (2) to endeavor to develop in the pupil a comprehensive view of the practice of agriculture in general, in much the same way as one endeavors to develop the body of a science. In either case the teacher will require the same fundamental training in the real facts and in educational processes.

The teacher in the high school, as in the elementary school, must nowadays be equipped in school gardening. A laboratory of living things is a necessary part of the best work in nature-study agriculture. It is customary to call this laboratory a school garden. We need to distinguish three types of school garden: (1) The ornamented or planted grounds; this should be a part of every school enterprise, for the premises should be attractive to pupils and they should stand as an example in the community. (2) The formal plat garden, in which a variety of plants is grown and the pupils are taught the usual handicraft; this is the prevailing kind of school gardening. (3) The problem garden, in which certain specific questions are to be studied, in much the spirit that problems are studied in the indoor laboratories; these are little known at present, but their number will increase as school work develops in efficiency; in rural districts, for example, such direct problems as the rust of beans, the blight of potatoes, the testing of varieties of oats, the study of species of grasses, the observation of effect of fertilizers, may well be under-

taken when conditions are favorable, and it will matter very little whether the area has the ordinary "garden" appearance. In time ample grounds will be as much a part of a school as the buildings or seats now are. Some of the school-gardening work may be done at the homes of the pupils, and in many cases this is the only kind that is now possible; but the farther removed the laboratory, the less direct the teaching.

(3).—SPECIAL SCHOOLS.

There are two current theories as to the best means of developing popular agriculture education: (1) By adding it in existing public schools or evolving it out of their present work; (2) by establishing special schools in which industrial, domestic, and agricultural subjects shall predominate. The latter means is now gaining rapid currency. It assumes several forms, namely, a county school system, as in Wisconsin; a Congressional district system, as typically represented in Alabama and Georgia; an adjunct to existing colleges or universities, as is now beginning in New York; a development of such schools in special localities here and there. The county or centralized high school in new regions that are dominated by agricultural interests becomes strongly industrial and agricultural, and the same will probably be true of new consolidated schools. In Minnesota an agricultural high school has been established in connection with the State University. All these schools are supported by public funds. Aside from these classes, there are various kinds of agricultural schools on private and denominational foundations.

These various kinds of schools do not belong to one educational class, but they are thrown together here because they are not a part of the regular public school system. So far as the preparing teacher is concerned, however, they are homogeneous in the sense of requiring a special training for special work, rather than a generalized training. In the higher and more specialized examples the work is carefully differentiated, so that some one phase of agriculture is given exclusively to one teacher.

There is every prospect that these special agricultural schools will increase in number in the next ten years, and they open the most attractive present field for those who would teach agriculture of a secondary public school grade. In fact, it is chiefly the demand created by these special isolated schools that has demonstrated the great lack of teachers for good agricultural work.

It may be well to raise the question with the prospective teacher, however, whether these disconnected schools are always to hold undisputed leadership, for thereby we shall be able to emphasize a very important pedagogical principle—the principle that agriculture edu-

cation should not of right be separated from all other educational effort. Education by means of agriculture is but a phase of education in general. The great effect of these special schools will be their influence in breaking down old prejudices, in setting new and independent standards of education, in arousing enthusiasm, in developing ways and methods of teaching the common affairs of life. They will react powerfully on the general public school system if their work is not too much insulated by mere technical teaching, perhaps contributing the most productive single influence in the much needed reform and reorganization of all the schools that represent rural communities. There is danger that in the isolation of these institutions we may also isolate the educational programme, and it is the duty of the teacher to see that this does not occur. The final solution is not the organization of special detached schools, but the re-directing of the existing public schools in such a way that they shall teach the members of their communities how to live.

PART II.—THE MEANS OF TRAINING THE TEACHERS.

Having now examined the nature of the demand for teachers of agriculture and the grades of teaching that are required, we may attack the question of determining where these teachers shall be trained. Where and how a teacher shall be prepared will depend, of course, on the phase or range of agriculture teaching in which he is to engage.

The degree of a teacher's preparation will be conditioned by the pay he is to receive. The general elementary schools, and most of the high schools, do not pay sufficient salaries to warrant a teacher in spending much time and money in perfecting his equipment in both agriculture and education. Good agricultural college training is practically out of the question for these fields at present, because graduates from such colleges of good abilities command better salaries elsewhere.

The schools will not command good teachers in these new subjects until they are able to supply fairly good equipment in the way of land, material, and apparatus. Very few schools are yet ready for good teachers of agriculture, wholly aside from the question of salary. No really good agricultural work can be accomplished by the customary schoolroom method.

The demand for teachers will arise here and there in the public school system largely in the desire to combine the teaching of agriculture and science. There is every indication that this demand will spread with considerable rapidity. The elementary grades will not yet demand special teachers for these subjects. The special or separate agricultural schools will demand special teachers, with thorough preparation. The demand for nature-study teachers is increasing. These teachers should be able to handle the agricultural work in the grades.

As to the kind of preparation that the teacher should have for good work in agriculture, the first requisite is a new point of view in education. The person need not be afraid to set sail on the ship of current educational theory, but he should be ready, on occasion, to throw overboard all his luggage. He is to land on the home patch, where he will meet new problems that he may want to attack naturally in his own way, and his progress should not be impeded. He

will not need all the things that he has picked up on his travels. He is to study the objects and materials just about him and as they actually exist, and he is to study them himself, and then impart his interest and his enthusiasm to his pupils. He will need tools of various kinds, as implements, books, notebooks, and apparatus, but they are only tools.

Again, he must teach first-hand fact, not mere theory or mere text-book. The recitation is only incidental; perhaps he will not utilize it in a good part of the work. All agricultural subjects must be taught by the nature-study mode, which is accurately to see the real object or the real phenomenon; to reason correctly from what is seen; to establish a bond of sympathy with the object or phenomenon that is studied. One can not see accurately unless one has the object itself. If the pupil studies corn, he should have corn in his hands, and he should make his own observations and draw his own conclusions; if he studies cows, he should make his own observations on cows and not merely repeat what some one has said about them. So far as possible, all nature-study work should be conducted in the open, where the objects are. If specimens are needed, let the pupils collect them. See that observations are made on the crops in the field as well as on the specimens. Nature study is primarily an out-door process; the schoolroom should be merely an adjunct to the out of doors, rather than the out of doors an adjunct to the schoolroom, as it is at present. It can not be too often repeated that the teacher and the pupil must *get out of doors*.

Again, the mere details of "method" are of very secondary importance. When the teacher knows a thing of his own experience and is consumed with enthusiasm for it, he will teach in spite of himself. The teacher must be taught to teach the significant things. Many a pupil is wearied of a subject by the endless attention to mere details, and to exceptions, and to overcareful explanations of this and that. Teach the detail only when the detail is relevant. Do not teach mere processes so far in advance of the need of them. It is the finest thing in teaching to have a nice sense of proportion.

Still again, the intending teacher of agriculture should not neglect the home side of farm life. What we call "home economics" is not necessarily a woman's subject alone. It is central to all effective agriculture. The country girl has just as much need of being put into touch with realities as the country boy has, and no teacher of agriculture, whether man or woman, should neglect or overlook the home any more than he should neglect or overlook the barns.

We may now consider the institutions that may train teachers. In the effort to elucidate this perplexing subject, correspondence has been asked of all State superintendents of public instruction in the United States and of all agricultural colleges, and appeal has been made to

many persons who have given this matter much thought. The correspondence culminating in this publication has covered several years, although not all undertaken for the particular purpose of this report. The kindest and freest responses have been given, for which the author now makes due acknowledgment. This correspondence discloses the most diverse opinions in respect to the means to be evolved for the training of persons to teach agriculture. All the respondents indicate a desire to see some means developed whereby teachers can be fitted for this work, evidencing their feeling that a question of great public moment is before us.

The subject may be clarified at once by dividing the efforts to train teachers for agriculture into two groups: (1) Those agencies that aim to aid teachers already in the schools to "get up" agricultural work; (2) those agencies that aim consciously to prepare new teachers for this field.

(1).—AIDS TO TEACHERS.

With the exception of the newly organized special agricultural schools, the present work in the teaching of agriculture will fall mostly to teachers who are now engaged in the schools. They have had no regular school training in the subject, as a rule, and they must now prepare themselves as best they can. They are often forced to pass an examination in what is called agriculture, even though there may be no means whereby they can compass the subject. For the present teachers various aids and short cuts are provided, and some of these agencies are also invoked to spread the propaganda of the new education among the people.

These agencies may be ranged under seven heads: (*a*) Summer schools and institutes; (*b*) introduction of agricultural work into brief teachers' institutes and convocations; (*c*) lectures before teachers, farmers, and various organizations, emanating from an educational center; (*d*) correspondence, reading club, and leaflet work; (*e*) short courses in agricultural colleges and other institutions; (*f*) supervising or advisory teachers who inspect the nature study or agriculture in a group of schools; (*g*) work of the United States Department of Agriculture.

These diverse agencies have exerted a powerful influence on public sentiment touching education that shall prepare men and women to live. In fact, the present momentum of the movement is very largely due to the extensional and propagandic work that these agencies represent. These enterprises can not be expected, however, to give persons the real initial foundation and point of view that will be needed in the coming teaching of agriculture; this real preparation in any teacher must come gradually as the result of work extending over a sufficient period to develop the time element in education. One or

more of these various enterprises is often sufficient, however, to put a good and experienced teacher into real touch with the problem and to enable him greatly to extend his usefulness. For many years to come they will be an important means of providing the agriculture teachers in elementary grades. Even if they should eventually cease to be important means of preparing teachers, such temporary agencies—much improved and intensified—will always be needed to reestablish teachers in the faith and to aid them in keeping alive to the progress of their time.

(A).—SUMMER SCHOOLS.

The vacation school probably affords the best means of aiding the teacher who can not take a year or more for preparation. These schools are of two orders: (1) those connected with an institution; (2) those held by State departments of education, being in the nature of prolonged and specialized institutes. If a person devotes himself to mathematics, language, literature, or science in a good summer school of six weeks' duration connected with an institution, he is able to receive a year's college credit for it; there is no reason why he should not cover similar ground in agriculture, if the subject is well taught. The summer schools are becoming more and more explicit and concrete. When they are held at an established institution, they have the advantage of the facilities that have been collected through years of effort. They are also dominated by the teaching spirit, as most of the students are themselves teachers. For agriculture teaching these schools may be very effective, because they come at a season when crops are growing. Many institutions now provide summer schools or sessions in which agricultural and kindred subjects are offered. It will not be long before all agricultural colleges will offer such work. This summer-school work in agriculture is coming to be very direct and practical. The University of Maine, for example, offers a five weeks' course in which one week is given to soils, one to plants, one to animals, one to birds and insects, and one to agricultural economics.

In many of the States the departments of public instruction hold one or more summer schools or institutes of one to four weeks, called also "summer normals" and "junior normals," for the benefit of teachers, at which definite agricultural subjects are taught. The college of agriculture often cooperates. In Minnesota, for example, about thirty-five summer training schools are held, that are in session from four to six weeks. These schools are supported by legislative appropriations. One or more lecturers are employed at these schools "to arouse the interest of teachers in the subject of agriculture and to outline simple courses of work that can be carried out by rural

teachers." Other States follow similar plans. One difficulty often reported is that speakers do not really give instruction in agriculture, but expand on the beauties of country life and on the means of keeping the boys on the farm.

(B).—THE REGULAR TEACHERS' INSTITUTES.

It is noticeable that even the regular brief institutes and teachers' meetings, held throughout the year, now are giving much attention to agricultural subjects, most often, perhaps, in their nature-study phases. These meetings may render the greatest help in putting teachers in touch with the most recent progress, new books, and new methods, although it should be distinctly understood that they can never of themselves give teachers sufficient training for any really effective teaching of agriculture. In their agricultural work, they are yet too prone to emphasize the extraordinary, the semisensational, and the wonderful, evidencing the fact that we are now in the exploitational stage of our agricultural education evolution. The teacher who is not well grounded may be led astray.

(C).—LECTURES. •

One of the most useful recent movements is the interchange of speakers between teachers' institutes and farmers' institutes. The agricultural colleges are also called on for much lecture work on educational topics; this is good both for the people and the college. Farmers are being called on more and more to recite their experiences. The farmers' institute organization in Illinois has been able to create a strong sentiment in favor of teaching agriculture in the rural schools, being regarded by the Superintendent of Public Instruction as the most powerful agency in this work. In other States the institutes have exerted a similar effect by means of traveling speakers. Such work not only establishes a point of view in the people, but discovers the promising teachers here and there and gives them courage and support.

(D).—CORRESPONDENCE AND LEAFLET WORK.

This class of work has now assumed large proportions in some quarters, and has fairly passed the epoch of hostile criticism, although it has not yet passed its experimental stage. When it has fully passed this stage, much of its spontaneity and usefulness will have ceased. The correspondence and leaflet method does not make as strong impression on the teacher as good summer school work or other means of direct personal contact with a good teacher; but it is most effective in arousing a sentiment for better things, and it may be very useful to the individual teacher who wants to work

at his problem quietly and resourcefully. It produces the maximum result at the minimum expense. Various clubs are organized, and crop-growing and exhibition contests are arranged. Combined with an organized lecture system and visitation system, it is probably the most powerful single engine to aid the teacher of agriculture and related subjects in the rural schools. Its greatest danger is its tendency to hold too many names on the lists, thereby limiting its usefulness to each one. One of its greatest faults has been the issuing of publications that are too technical and too dryly agricultural. On the whole, no other agency has placed so many real helps before the teacher.

(E).—SHORT COURSES IN AGRICULTURAL COLLEGES.

Many of the agricultural colleges have long been giving brief courses for farm youth. They are now beginning to adapt some of this instruction to the needs of teachers, and it is probable that the demand for such adaptation will increase. Some of the colleges are offering courses of one and two years' duration, but these partake of the nature of real normal departments and may be considered in a subsequent part of this paper.

In two or three States spring schools are held at the agricultural college. The schedule of such a school given by the North Carolina Agricultural and Mechanical College is as follows:

Four weeks' spring normal agricultural courses.

[Twenty-four hours per week; total, 88 periods.]

	Periods.
Animal husbandry	8
Dairying	8
Horticulture and floriculture	8
Soils and farm crops	8
Bacteriology	2
Physiology and hygiene	4

NATURE STUDY.

Plant studies	5
Animal studies	4
Insect studies	4
Common branches: Arithmetic, grammar, geography, reading, and history ..	20
Methods of teaching	16
School sanitation	1

(F).—PERIPATETIC TEACHERS.

Following the city school plan of having a visiting teacher of music or manual training, some places have adopted a similar plan for rural schools. One teacher can visit several schools, either giving the instruction himself, or, what is better, supervising and directing the work of a teacher in each school. The former phase (the peripatetic

teacher doing all the teaching) may be worth the while in starting the new education, or in the lack of teachers. The second phase (the directing of other teachers) is very effective when the individual teachers are not themselves expert, and it should have a marked effect on the teacher. This plan has been tried in Canada, and one teacher there writes:

The teacher must be trained, and it may be by a graduate of a normal school or an agricultural college, or by a director or supervisor of nature study. I think the last way is a good one. It improves the instruction in the school at the same time that the teacher is being trained, and many teachers think they can learn to better advantage in a school of their own than at a normal school. Of course, normal training should come first, and further training in nature study can be given the teacher while at her work, by a director of nature study; but this director should be an educator and not a mere specialist in some branch of natural science.

In some places it may be possible for a teacher of agriculture in a high school to inspect and supervise the agriculture teaching in the elementary schools of the region. If he is himself well trained, he should be able to exert a great influence in putting the other teachers on their feet.

(6).—UNITED STATES DEPARTMENT OF AGRICULTURE.

Much of the work of the national Department of Agriculture is distinctly educational and is of great value to teachers; and the Office of Experiment Stations maintains an organization to aid schools, colleges, and teachers in their pedagogical work. This Office is able often to send speakers to teachers' institutes and elsewhere; it maintains a large correspondence with school men; it publishes bulletins of information and advice on school gardening and agricultural teaching; it collects data on both foreign and American school work for the purpose of keeping the public informed of the state of agricultural education; and in general it lends counsel and encouragement to those in need of it.

(2).—THE TRAINING OF NEW TEACHERS.

We now come to the real question before us—where the agriculture teachers of the future are to be prepared.

Seven types of institutions or organizations are now beginning to train teachers for agriculture: (a) State normal schools; (b) local normal schools; (c) high schools and training classes; (d) separate agricultural schools; (e) special detached foundations for industrial work; (f) education departments of colleges and universities, and teachers' colleges; (g) agricultural colleges. It is not the purpose of this report to make any full discussion of these categories, unless perhaps the last one, but only to indicate what seems to be the most

promising field for each group of institutions. The agencies comprised in the above categories are not always distinct from some of those that aim chiefly to aid the present-day teachers (see page 25). These two groups merge, some of the shorter-course agencies often being conducted by the organizations mentioned in the present list. The purpose of the division into the two groups, however, is not to classify organizations or agencies, but to clarify the discussion by calling attention to the two main lines of effort. In general, an organization that maintains a continuous course of work for at least one school year is placed in this second group. It is not the object, in either of these groups, to make a complete list of the subclasses of institutions or organizations, but only to indicate the leading types. It may probably be taken for granted that in the end adequate preparation for the teaching of agriculture in the secondary schools, special industrial schools, and normal schools can be secured only in some kind of professional institution organized for the training of teachers; but the serious work of training teachers for agriculture in the schools is only begun here and there, and adequate systems are yet to be worked out.

(A).—STATE NORMAL SCHOOLS.

Nearly all the correspondents who have contributed suggestions to this report express the opinion that the regular normal schools should train teachers for agriculture. Theoretically this may be true, but the normal schools, as other institutions, face the practical conditions under which they exist. In a western State where cities are few and small, where agriculture is the dominant industry, and where normal schools are new, the educational problem is very different from what may obtain in one of the easternmost States. In the Eastern States the normal schools are taxed to their full capacity to supply teachers for the cities; the cities pay good wages for teachers; the normal schools are likely to be located in cities and without farm land; their energies are consumed in a line of work for which they have become adapted by years of effort. In such cases good agricultural work can not be added without a new and radical type of extension of the school; and it then becomes a question whether it would be better for the State to make such extension or to establish a new kind of training school elsewhere. It is a question, also, whether the normal method, as developed in some of these schools, is sufficiently elastic and adaptable to render good agriculture teaching possible. At all events, one can not look to all the existing normal schools in the older States, or even to any considerable part of them, for the training of teachers for this kind of work.

In the Middle West and in the newer States many of the normal schools are beginning to train in agricultural subjects. Heretofore the courses in these subjects have been largely adjuncts to the natural science teaching, but the work is now being differentiated. In Georgia it is expected that the State normal school will train teachers of agriculture for the elementary schools. "No one is given a diploma who does not take the prescribed work in agriculture. There is a regular professor of agriculture and he has about 20 acres under cultivation." Such courses, the correspondent thinks, "will assure a constantly increasing number of trained teachers for the elementary schools." For the most part, however, the regular State normal schools, particularly in thickly settled States, will probably train teachers for graded town and city schools rather than for elementary rural schools. Public pressure may force such of them as are most advantageously situated to establish special courses or classes to meet the needs of the rural schools, in much the same way that agricultural colleges have been obliged to organize short courses for farm youth.

In some States a special effort is made to interest the country boys and girls in the normal-school training. In Illinois, for example, a law was passed in 1905, called the "Normal school scholarship law," which provides that one pupil from each township in the State, selected by competitive examination, shall annually be awarded free tuition in one of the five State normal schools for four years. This makes it possible for each of the 1,887 townships of Illinois to have in the normal schools four pupils who at any one time are taking advantage of these scholarships. These boys and girls are from the common schools, graduates of the eighth grade, and, as the law is now working, 95 per cent of them come from the country districts. Having been born and bred on the farm, they are familiar with farm conditions, and have sense experience of farm life. These persons go into the normal schools for one term, two terms, or a year of work, and then return to teach in the country schools, coming again, it may be, to the normal school to do further work. It is expected that this plan will supply many energized teachers for the rural schools.

(B).—LOCAL NORMAL SCHOOLS.

The inability of the regular normal schools to supply teachers for rural elementary work has led to the establishing of county and other normal schools. In Wisconsin there are sixteen county institutions, and four more in process of organization. The sole purpose of these Wisconsin schools is to train teachers for the rural communities. The diploma is a three-year certificate, permitting the holder

to teach for that length of time in the rural or ungraded schools. These certificates may be renewed for another three years, provided the holder can give evidence of having taught successfully. The Dunn County Normal School, one of the first to be established, has been in operation for eight years, and it is reported that there is scarcely a rural school in the county that is not taught by its graduates. It is apparently only a question of time and legislative action before practically all the counties of the State will have such schools.

The Wisconsin county normal or training schools are among the best institutions yet developed in this country for the direct training of teachers for local rural schools. They are organized for a specific purpose. The salaries are now as good as in the State normal schools. In Menomonie, Wausau, and Marinette the county normal school is in the same building with the county agricultural school; the instructor in agriculture in the latter school takes the normal school students for work in agriculture, and the normal school reciprocates by giving an equivalent amount of academic work to the agricultural students. This tends to set a standard for the pedagogical instruction in such other normal schools as are not fortunate enough to be in direct connection with a school of agriculture. The course of study in the normal schools is now two years, or high school graduates may take a one-year course. A well-known educator of Wisconsin writes that "the schools have so thoroughly approved themselves to school officials and to the public generally in the counties where they have been in existence that it is almost impossible for a person to get a position in the counties where these schools are located who has not had at least the work which the training offers." The work in agriculture in these normal schools is as yet not large, but it will increase. The course of study in the Richland County Training School is here given as an illustration of the content of the work, as all these schools have similar curricula:

First year.

FIRST QUARTER :

Algebra.
Agriculture.
Grammar.
Primary reading and orthoepy.

THIRD QUARTER :

Algebra.
English history.
Primary constructive work.
Expressive reading.

SECOND QUARTER :

Algebra.
Political geography.
Composition.
Expressive reading.

FOURTH QUARTER :

Arithmetic.
United States history.
Spelling and penmanship.
Literary reading.

Second year of the two-year course, or the one-year course for those prepared to take it.

FIRST QUARTER :

Arithmetic.
Drawing.
Reading and orthoepy.
Physical geography.
Psychology and pedagogy.

THIRD QUARTER :

United States history.
Composition.
Literature.
Physiology.
Practice teaching.

SECOND QUARTER :

Arithmetic.
Grammar.
Literature.
Political geography.
Methods.

FOURTH QUARTER :

United States history.
Constitutions.
School management and spelling.
Agriculture.
Practice teaching.

After having taught in a rural school for a time, it is to be expected that most of the graduates who desire to continue to teach will enter State normal schools or other institutions, and prepare for city school work. The rural schools do not yet offer sufficient attractions to secure well-prepared teachers for a long tenure.

(c).—HIGH SCHOOLS AND TRAINING CLASSES.

It is often urged that high schools give instruction in agriculture as a part of their general course for the purpose of fitting teachers in the subject. It is very doubtful, however, whether we should really look to the ordinary graduates of high schools for rural teachers. It requires more than the usual maturity, and considerable experience in affairs, to handle a rural elementary school effectively; and if a direct appeal is to be made to the farming constituency on the basis of agricultural work in the school, the teacher must be sure of his practical ground. Again, the high schools are not professional schools, and are not organized for normal work. The teachers that may be expected from them are mostly women. Agriculture should be introduced into the high school for its educational value. It will, then, constitute a good ground work for later training in education in a training class or elsewhere.

Another means of fitting teachers for rural elementary schools is in training classes developed in high schools or other institutions. These agencies have been widely adopted, but opinion as to their ultimate value seems to be divided. They are usually organized specially to meet rural school conditions. They are commonly connected with an accepted high school. The course of study covers one year or more. The students may or may not be high school graduates. Usually the work covers the elementary syllabus of the State, and this syllabus may contain agriculture. The successful completion of the course certifies the student to teach in certain of the schools. Agriculture is often a regular part of the course of study in these

classes. In Michigan "elementary agriculture" is in the fourth quarter of the year's course in the "County normal training classes." In Nebraska a very full two-semester course in agriculture, with laboratory work, is provided for "Normal training in high schools." This normal training in Nebraska is given in the eleventh and twelfth grades. "Credit for such training shall be given upon the completion of the prescribed course in normal training and the regular high school course of study."

A canvass of an apparently representative high school training class in one State showed four members to be high school graduates and nine to have had considerable high school work. Six of them were from farms and considered themselves to be fairly well qualified to teach some of the subjects relating to farming. The ages ranged from 17 to 22, the average being 19. All were women.

A further inquiry in the same State showed that 345 out of 470 training class students had spent most of their lives on the farm. Of this number, 322 considered themselves capable of teaching agriculture, but it should be said that agriculture teaching has not yet been introduced practically in that State. The ages of these students, nearly all women, range from 17 to 34 years, the average being 21 years.

No general opinion can be expressed on the efficiency of training class work in the fitting of persons to teach agriculture, for everything depends on the organization of the enterprise, the safeguards thrown about it, the age, experience, and qualifications of the students, the extent of the agricultural work, and the way in which it is taught. These classes, of one kind and another, are now sending out very many teachers to the rural schools. Their great handicap is that they themselves can not secure teachers properly qualified to give instruction in agriculture. No real preparation of training class students to teach the agriculture of a syllabus can be expected unless the teacher of the class has himself had good preparation in the subject.

(D).—SEPARATE AGRICULTURAL SCHOOLS.

The county and other schools of agriculture and domestic science that have lately been organized have thus far confined their energies to regular agricultural or industrial work; but many persons expect that they will also become important centers for the training of teachers for elementary and secondary schools. If they enter this field, it is a question whether they will not be in danger of alienating their regular farming support, unless they can command more resources than are now in sight. These schools are organized chiefly to supply a direct agricultural need. It will require considerable increase in funds if they hold this field and also enter another. It

is expected that these schools, of all others, will send youth directly back to the farms. In Wisconsin, where there has been experience in both agricultural and normal work, the two functions are separated; and this would seem to be the logical result for all States.

(E).—SPECIAL FOUNDATIONS.

Various institutions on private or semiprivate foundations, and not a regular part of public school enterprises, offer facilities for teachers to prepare in agriculture and kindred subjects. A marked example of this group is the Macdonald Institute at the Ontario Agricultural College, Guelph, Canada. "Its equipment and accommodation is ample to furnish long and short courses in home economics, nature study, and manual training—the last two for teachers, male and female, and the home economics for farmers' daughters and other young women who desire to learn the theory and practice of cooking, ventilation, general housekeeping, laundry work, sewing, dressmaking, millinery, home decoration, etc." Summer courses are provided at Guelph; also a one-year normal course "to provide instructors fitted to carry on the work of nature study and school gardens in a group of rural schools, in a large consolidated school, or in an agricultural high school." The new Macdonald College, near Montreal, will have a profound influence on the teaching of country life subjects.

The Hampton Normal and Agricultural Institute, Virginia (a parental type of others in the South), provides normal training for negroes and Indians. The year for agricultural students is twelve months, with a vacation of a few days or weeks only. At the close of the academic year class-room work stops, but each student is given work in the different divisions of the department, where he can get experience in planning and directing labor and field operations and in assuming responsibility. At the same time he is given instruction in the best methods of managing labor. Actual class-room work under normal methods, and practical field work, seem to fill a great need in fitting the students for teaching what they have acquired in the class room.

Students of Hampton who design to teach receive, before being graduated, four months' instruction in psychology and the principles of teaching, four hours per week, and also engage for four months in actual teaching in the class room. The student teaches all of the common school subjects of the State of Virginia. A large school garden affords opportunity for the teacher students to work with children in the open during April, May, October, and part of November. For the winter season, an indoor course in nature study and agriculture supplements the outdoor work. Post-graduate students

receive two months' training in teaching classes in the training school. These students teach agriculture and elementary science. They plan their lessons, teach children to work in the garden, and conduct field trips.

(F).—EDUCATION DEPARTMENTS AND TEACHERS' COLLEGES.

Much is to be expected of schools and departments of education in universities in the preparing of teachers for the higher ranges of public school teaching in agriculture. This is particularly true when a college or department of agriculture is comprised in the same university. In such case a four-year course can be assembled, involving two years of sound general scientific study, followed by two years in which the study of agriculture and related subjects is combined with training in education, all having special reference to high school and normal school problems. This would involve the modification of some of the regular instruction in the agricultural departments, or, preferably, new courses in them to meet the special needs of teachers. Professional schools of education that do not have regular agricultural connection may well cooperate with a neighboring college of agriculture by incorporating a year, more or less, of the work of such college as a part of its own course of study for those who desire to prepare specially for agriculture teaching. Teachers College of Columbia University in this way catalogues certain courses of the College of Agriculture at Cornell University.

Following is the statement of Teachers College in respect to the cooperation mentioned above (1908):

Agriculture in high schools.—The rapid development of agricultural instruction in many public schools is creating a demand for specially trained teachers. It is the consensus of opinion of school officers that for such instruction there is need of teachers who have been thoroughly trained in general sciences, biology, in particular, with its application to agriculture, and also in the principles of education. Many agricultural colleges give the subject-matter which is needed, but they do not deal with the educational applications. In order to combine the advantages of an agricultural college with those of a strictly educational institution a plan of cooperation has been arranged between Teachers College and the College of Agriculture at Cornell University, whereby students preparing for special work as teachers of agriculture may take the appropriate courses in the science of agriculture at Cornell University (especially principles of agronomy, horticulture, and animal husbandry) and then study the educational problems at Teachers College.

As already stated, it is desirable that agriculture should be combined with nature study and biology, or with nature study and physical science. Such combinations may be made by candidates for the bachelor's and master's degrees at Teachers College. The intimate relation of elementary agriculture to biology and nature study makes it desirable that their educational aspects should be involved in the same courses. Hence the student giving especial attention to agriculture will arrange a course at Teachers College as suggested above for biology and nature study; but having had previous special work in

the subject-matter of agriculture at Cornell University, or elsewhere, the individual work, such as preparation of papers and theses, will in the educational course be centered around problems of agricultural teaching.

Approved courses in the science of agriculture taken in agricultural colleges other than Cornell will be credited at Teachers College.

In the University of Missouri the Teachers' College utilizes courses in the College of Agriculture for teachers who desire to fit themselves for teaching agriculture in the public schools. These courses in the College of Agriculture are in the main distinct from the regular agriculture courses, and are designed primarily for teachers. Credits are given for the work only to students in the Teachers' College who are expecting to be teachers. In addition, for the university students who have taken sufficient of this elementary work for teachers and who have also the requisite preparation in the natural sciences, provision is made for electing and receiving credit for some of the technical courses in agriculture and horticulture which are given in the College of Agriculture. A good many teachers in the Teachers' College are enrolling regularly in these courses in agriculture and horticulture, and some of them later elect the more technical courses in the College of Agriculture, in order still further to increase their training in agricultural subjects for the distinct purpose of enabling them to teach agriculture in the public schools.

Speaking of their various experiences in aiding teachers to handle agricultural work, an officer of the University of Missouri writes as follows:

In my judgment the most effective results in proportion to the energy expended have been secured through the courses offered to teachers in the university. Perhaps the majority of teachers who take agriculture regularly in the university courses do not themselves teach directly in the country schools, but in the better high schools of the State, in smaller towns surrounded by good farming communities. These teachers in the high schools have the training of a large number of young people who teach in the country schools later, so that it is safe to say that every teacher who takes our regular university courses in agriculture reaches with this teaching hundreds of young men and women who will go out into the country schools as teachers. A good many schools of this State are teaching agriculture and kindred subjects in one way or another. Many of them are correlating the work with geography, with language, and even sometimes with other subjects in the schools, through the aid of school gardens or school plantings, and by a study of the material with which the pupils come in contact at their homes. In addition to correlating the work with other subjects, some of the schools give regular courses in agriculture and horticulture.

(g).—COLLEGES OF AGRICULTURE.

The agricultural colleges are now beginning to devise means of extending their efforts to the training of teachers in agriculture. This movement is of such vast importance in the field of practical pedagogy that it may now be separately discussed in a final chapter.

PART III.—THE GENERAL OUTLOOK, AND THE SIGNIFICANCE OF NORMAL WORK IN THE COLLEGES OF AGRICULTURE.

We have now taken a general look at the demand that is arising for teachers in agriculture of a public school grade, and we have reviewed the main types of agencies that promise to aid us in supplying these teachers. We may now throw these normal agencies into something like a classified system, and indicate the main lines of a rational procedure.

1. The elementary schools demand general teaching. Not much that is named agriculture is possible with the pupils of elementary school age, but nature study and the industrial spirit should constitute the foundation of their work. The district rural schools are elementary schools. They pay small wages and offer few attractions to teachers. For the most part they are able to secure the services only of those persons who are on the way to other employment. Their teachers are mostly women. Until these conditions change, the rural schools must draw their teachers chiefly from the region of the high schools. Whenever good science work is an important part of the high school course of study, and particularly when good agriculture teaching is also introduced as a regular part of the curriculum, a training class in connection therewith and requiring a high school diploma for the completion of the work should be able to make great progress in preparing teachers for the elementary grades. Some of the teachers for the grades will be recruited from the ranks of those who do not complete normal school courses, and some States or counties may provide special means of training such teachers by organizing normal school work below the regular normal school grade. In the end special local means or institutions must be provided for the training of these teachers, and it is time that this were recognized. At present, however, it may be repeated, it is incumbent on the secondary school region to train the teachers for the elementary region.

2. The teachers who are to train these elementary teachers must themselves be trained. They must have real preparation, if the agriculture teaching is to be of permanent value; they can not be trained in the common teachers' institutes or by other mere short cuts. The teachers of this secondary normal work must be trained in institutions where genuine agriculture is established; some of the State normal

schools may provide this work; some of the special separate schools of agriculture may provide it; some of the education departments or teachers' colleges in association with agricultural departments of higher institutions may provide it; the agricultural colleges will be obliged to provide it. The best trained and best adapted of the graduates of the colleges of agriculture, however, will find better openings than most schools of the secondary region are at present willing to pay. The preparation of such teachers should include general scholarship and training in the principles of education, as well as specialized scholarship in agriculture and other industrial work, and also sufficient hand practice outdoors and indoors to give them command of the technique of instruction.

3. If the regular agriculture teachers of secondary schools and the teachers of secondary training classes are to be prepared in the State normal schools, then these normal school teachers must themselves be trained in agriculture. Their training must be more than can be secured in the normal school itself. They may be trained in education departments of universities and in teachers' colleges, provided always that these institutions are associated with real agricultural work, such as is possible in an agricultural college; or they may be trained in the agricultural college itself.

4. The agricultural college necessarily stands at the head of the system. It holds the key to the situation. It must provide the leaders.

The body of knowledge and philosophy that is comprised under the modern word "agriculture" is of such vast range, the subjects are so numerous and so difficult, the equipment required to teach it is so large and so expensive, that only such institutions as are specially devoted to the subject can understand it or properly represent it. These institutions express a great phase of our national life. More than any other institutions they stand for the very democracy and nativeness of education, for their purpose is nothing less than to reach the last man on the last farm by means of the very things by which that man lives.

It is good to have seen these colleges of agriculture gradually emerge and then enlarge their territory, quietly annexing this subject and that, until they have come to be one of the great social and spiritual forces of the day. They have not yet developed a pride of education, and they have not reached the limit of the territory that they will annex. It may be found, in good time, that they have forced new standards of education. These colleges will now add normal departments and they will attract the teaching type of mind. The graduates of these departments will supply some of the normal schools; some of the high schools; some of the training classes and special normal organizations; and what they give will be passed on

from school to school and grade to grade, until it fertilizes the whole enterprise. This is not at all a mere visionary outlook, and for the very good reason that the agricultural colleges are the only teaching institutions that are in possession, at first hand, of the essential facts of rational agriculture.

A number of the colleges of agriculture have already undertaken to develop teachers' courses, either on their own account, or in association with the education departments of the universities with which they are connected. Congress has also given them a direct opportunity to establish such work in a provision of the Nelson amendment to the agricultural appropriation bill for 1907-8: "Said colleges may use a portion of this money for providing courses for the special preparation of instructors for teaching the elements of agriculture and the mechanic arts."

The Nelson amendment provides, when it shall have matured, for the appropriation of \$25,000 annually to the land-grant colleges of each State. This is the only national appropriation that specifically recognizes this particular kind of college work. This fund will afford an unexcelled opportunity for some of the stronger institutions to establish a department or school in which persons shall be trained directly for the teaching of agriculture and the mechanic arts in the public schools.

MASSACHUSETTS AGRICULTURAL COLLEGE.

The Massachusetts Agricultural College established in 1907 a department of agricultural education, with a professorship. W. R. Hart, formerly of the State Normal School at Peru, Nebr., has been chosen to head the department. This department is organized under a State law that makes an annual appropriation of \$5,000. This law originated from a recommendation of the Massachusetts commission on industrial and technical education, in 1906. (The report of this commission is a most valuable contribution to the subject of industrial education.) The first move was the organizing of a summer school of agriculture of four weeks, which had an attendance of considerably more than two hundred. Following is a course of instruction for the year 1908-9:

1. *The meaning of education*, dealing with the biological and psychological aspects of the processes of learning.
2. *Vocational education*, being chiefly historical. This is given in 1907-8.
3. *Methods in agricultural education*.
4. *Seminar*, a study of problems in agricultural education.

COLLEGE OF AGRICULTURE OF THE UNIVERSITY OF ILLINOIS.

The College of Agriculture of the University of Illinois has an instructor in secondary school agriculture, D. O. Barto, an experienced school-teacher and a graduate of the college, who for two years has

been employed to give his entire time to the question of teaching agriculture in the public schools. He visits farmers' institutes and teachers' institutes, freely discussing these questions, and offers two courses of instruction during the university year. One of these courses is designed to train teachers for the secondary schools, and the other to train them for the grades. These courses are repeated in the summer session. The particular courses offered in 1907-8 are as follows:

1. *Principles and methods of high school agriculture.*—This course, designed for students who have had not less than two years' work in agriculture, will be devoted mainly to considering what features of agricultural science are best adapted to high school conditions, the best order and methods of their presentation, how to suit the course and instruction to the special interests and needs of each school community, what laboratory work shall be given, what apparatus may be used, what field experiments can be planned and executed.

2. *Elementary agriculture.*—This course is for those students who are preparing to teach in secondary schools, especially for teachers of science, but who have had no work in agriculture. A study of the soil, its origin, nature, functions, properties, and classification; problems of temperature, aeration, control of moisture; enrichment and impoverishment of the soil; the plant, how it feeds and grows, its modes of reproduction, factors in crop production, rotation, value and use of legumes, selection and testing of seed, their types and breeds, care and management; dairying, production of milk, testing and care of milk; farm plans, farm machinery; economics of agriculture.

3. *Farmers' institute management.*—A study of the farmers' institutes as a factor in our system of public education. This course is designed to set forth principles underlying the organization and conduct of farmers' institutes and agricultural associations and to systematize into definite lines the knowledge acquired in college to the end that the student may render more distinct service in institute and agricultural associations. Lectures; assigned readings and parliamentary practice.

NEW YORK STATE COLLEGE OF AGRICULTURE.

In the New York State College of Agriculture at Cornell University a two-years' normal course in nature study, leading to regular academic credits, was organized in 1903, and this is now known as a normal department, with six persons giving instruction. This organization is the natural outgrowth of the nature study and other extension enterprise that has been under way in the institution for many years. Summer schools of nature study were held in 1899 and 1900. A regular summer session is in process of organization. A rural schoolhouse, accommodating thirty pupils and provided with workroom and located in a school garden, is part of the equipment. Following is the course of study for 1907-8:

This course is organized to help persons who expect to teach nature study and country-life subjects in the public schools. Persons actually engaged in

teaching and also all persons in the university who signify their intention to teach are eligible. A certificate will be given on the completion of sixty hours in the courses prescribed below, together with such other work in the College of Agriculture as may be approved by the director. Designed to prepare students to teach elementary agriculture. Practice work is given in the public schools of Ithaca.

	No. of course.	First term.	Second term.
FIRST YEAR.			
Botany.....	1	3	1
Botany.....	2		2
Invertebrate zoology.....	1	2	
Vertebrate zoology.....	2	2	
Entomology.....	3		3
Physical geography.....	1	3	3
Chemistry.....	185	3	
Nature study.....	91	3	
Nature study.....	94		2
Elective, at least two-thirds agriculture.....		16 0-2	11 4-7
SECOND YEAR.			
Vertebrate zoology.....	6	3	3
Botany.....	5		2
Entomology.....	15	3	3
Soils.....	101	3	
Farm crops.....	111		3
Nature study.....	92		1
Nature study.....	93	2	
Elective, at least two-thirds agriculture.....		11 4-7	12 3-6

91. *Nature study*.—Lectures and discussion of methods. First half year. Credit, three hours. M., W., F., 12.

92. *Home nature-study work*.—Work in the training classes in the Ithaca schools in which students are also to take part. Second half year. Credit, one hour. By appointment.

93. *Practice work in nature study* in the public schools of Ithaca, comprising schoolroom work, excursions, and other exercises with children. First half year. Credit, two hours. By appointment.

94. *School gardens*, comprising actual garden making with children on school grounds and in the university school gardens. In winter the work will be conducted in the forcing houses where plant-growing subjects will be taken up in such a way as to adapt them to elementary school conditions. Second half year. Credit, two hours.

98. *Seminary in nature study and elementary agriculture*.—Devoted to the study of the methods of teaching nature study and elementary agriculture, and to the review and criticism of courses now offered in our elementary and secondary schools. Credit, one or two hours. F., 12.

99. *Nature study*.—Advanced course. Individual work on special problems. Registration only after consultation.

UNIVERSITY OF MISSOURI.

In the Teachers College of the University of Missouri provision is made for pedagogical work in agriculture. In this college John C. Whitten is "professor of the teaching of horticulture," and Frederick

B. Mumford "professor of the teaching of agriculture." The following courses are offered by these officers:

(a) *Agriculture.*

Professor MUMFORD.

1a. *Soils and plant studies, with reference to agriculture.*—This course will aim to give a clear general knowledge of the principles of agriculture. The character of the work is adapted to those who are preparing to teach in the elementary schools. *Three times a week, first semester.* Hours to be arranged.

2. *The principles of agriculture.*—Fundamental conceptions of soils, plants, and animals, and their application to agricultural practice. Lectures, reading, laboratory work, and field excursions. A course for high school and academy teachers. *Three times a week.* Hours to be arranged.

Other courses in agriculture may be elected by students in the Teachers College.

(b) *Horticulture.*

Professor WHITTEN.

1b. *Cultivated plants.*—How they grow under culture, their relation to their environments, and common methods of propagating and managing plants; the materials for a school garden and how to use them. Lectures and laboratory. This course is intended for those who are preparing to teach in elementary schools and who may not have time for the longer courses offered by the department. *Three times a week.* Hours to be arranged.

1a and 2b. These two courses taken together constitute a year's work in which the topics mentioned in 1b are given fuller and more scientific treatment. They can be taken after 1b or independently of it, and are designed to meet the needs of those who are preparing to teach in any branch of biological science. *Three times a week.*

4a. *The evolution of cultivated plants.*—Lectures and assigned readings. A study of organic evolution as applied to the modifications of plants, particularly those in cultivation. *Three times a week.* Hours to be arranged.

Other courses in horticulture are open to students in the Teachers College.

COLLEGE OF AGRICULTURE OF THE UNIVERSITY OF MAINE.

The College of Agriculture of the University of Maine late in 1907 organized the following course in agriculture for those who intend to become teachers of this subject in the public schools:

This course is offered in response to a call for teachers capable of teaching elementary agriculture in schools and academies. In order to receive a degree one hundred and fifty hours, or 30 credits, must be received. The following course as laid down covers one hundred and forty-six hours. The remaining six hours have been purposely left open for elective work in order that the student may receive as liberal a training in cultural studies as is consistent with the amount of technical work necessary. It is recommended that the electives be taken from the departments of biology, history, economics, chemistry, physics, or English.

Freshman year.

FALL SEMESTER.		SPRING SEMESTER.	
Subject.	Hours.	Subject.	Hours.
Chemistry	2	Chemistry	3
Laboratory chemistry, 2 ^a	1	Laboratory chemistry, 2 ^a	1
Public speaking	1	Public speaking	1
English composition	3	English composition	3
Drawing, 6 ^b	2	Drawing, 6 ^b	2
Modern language	3	Modern language	2
Algebra	5	Solid geometry	5
Military, 5 ^a	2½	Trigonometry	
		Military, 5 ^a	2½
	19½		19½

Sophomore year.

Soils	2	Fertilizers	2
Soil laboratory, 2 ^a	1	Animal breeding	2
General biology	2	Stock judging, 2 ^a	1
Laboratory biology, 2 ^a	1	General botany	2
Qualitative analysis, 8 ^a	4	Laboratory botany, 4 ^a	2
History of education	3	History of education	2
English	1	Qualitative analysis, 8 ^a	4
Wood shop work, 4 ^a	2	Principles of fruit growing	2
Physical training	½	Forge work ^a	2
Elective work	(?)	Physical training	½
	16½		19½

Junior year.

Agricultural engineering, 4 ^a	2	Farm crops	2
Animal breeding	2	Laboratory farm crops, 2 ^a	1
Stock judging, 2 ^a	1	Vegetable gardening	2
Physiology	2	Handicraft, 4 ^a	2
General methodology	3	Child study	3
Pomology	2	Veterinary science	2
Laboratory pomology, 2 ^a	1	School gardening, 3 ^b	1
Modern language	3	Modern language	2
Physical training	½	Physical training	½
Elective work	(?)	Elective work	(?)
	16½		15½

Senior year.

Animal breeding	2	Dairying	2
Biological chemistry	5	Laboratory dairying, 3 ^a	1½
Agricultural botany	2	Agricultural chemistry	5
Laboratory agricultural botany, 2 ^a	1	Entomology	2
Landscape gardening	2	Laboratory entomology, 4 ^a	2
Physics	5	Veterinary science	2
Elective work	(?)	Bacteriology	2
		General forestry	2
		Laboratory physics, 4 ^a	2
	17		20½

* Two hours count as one.

* Three hours count as one.

NORTH CAROLINA COLLEGE OF AGRICULTURE AND THE MECHANIC ARTS.

The North Carolina College of Agriculture and the Mechanic Arts is now providing a one-year normal course in agriculture, the following announcement of which will appear in the next catalogue of the college:

One-year normal course in agriculture, North Carolina College of Agriculture and the Mechanic Arts.

Subject.	Periods a week—		
	First term.	Second term.	Third term.
Methods of teaching agriculture.....	2	2	2
Agriculture (general).....	3	3	3
Horticulture.....	3	3	3
Animal husbandry.....	3	3	3
Dairying.....	5		
Diseases of live stock.....		5	
Botany.....	3		
Poultry.....		3	3
Entomology.....			2
Agricultural literature.....	1	1	1

Electives in college departments, e. g., agricultural chemistry, land surveying, physical and physical laboratory, drawing, and others.

NORTH DAKOTA AGRICULTURAL COLLEGE.

The College of Agriculture in North Dakota offers a "teachers' course," described as follows (1907-8):

Under the provisions of the "Nelson law" enacted by Congress in 1907 the following course is offered for the training of teachers, fitting them to teach the elements of mechanic arts and agriculture. It is also the aim of this course to provide the three terms' work in pedagogy which graduates must have in order to benefit by the statute entitling them to a State certificate on their diplomas. To the many students who frequently have to turn to teaching temporarily before completing their studies, this line of work will be found very helpful.

During the past three years regular work has been given in nature study and elements of agriculture in order to meet the rapidly increasing demand for rural teachers able to instruct in these subjects. In addition opportunity was given to review all subjects required for first and second grade certificates. As there was no desire to duplicate the courses of the normal schools or to enter on their field of pedagogy, the work was neither emphasized nor given prominence.

The new law, however, has marked out a definite field for agricultural colleges in the training of teachers and given them a mission in harmony with their general plan and purpose. In order to fit teachers to teach elements of mechanic arts and agriculture and fill positions in common, village, or city schools, it has become necessary to add another year's work to the course as outlined heretofore. The units constituting this additional year are all, with the exception of the history of education, of a technical nature, and fall either under the head of mechanic arts or agriculture, or the pedagogy of these branches.

The entering student is expected to have had eighth grade or one year's high school training. In addition to a thorough training in elementary subjects, there is required a course in elementary agriculture taught by the professor of agriculture. The course covers three years. The agriculture is as follows:

Teachers' Agriculture II.—Agricultural physics, fall term.

Teachers' Agriculture III.—Agronomy, winter term.

Teachers' Agriculture IV.—Animal husbandry, with laboratory, spring term.

Teachers' Agriculture V.—Horticulture, afternoon work, spring term.

Following is the full schedule of the teachers' course at the North Dakota College:

First year.

Fall.	Winter.	Spring.
Grammar, 8 a. m. Oivics, 9 a. m. Reading, 10 a. m. Arithmetic, 11 a. m. Nature study, 3 to 5 p. m.	Physiology, 8 a. m. United States history, 9 a. m. Geography, 10 a. m. Grammar, 11 a. m. Elements of agriculture I, 3 to 5 p. m.	Grammar, 8 a. m. United States history, 9 a. m. Theory and practice, 10 a. m. Formation of soils, 11 a. m. Nature study, 3 to 5 p. m.

Second year.

Psychology, 8 a. m. Elements of chemistry, 9 a. m. ——, 10 a. m. Zoology, 11 a. m. Chemical laboratory, 2 to 5 p. m. Zoology, 2 to 5 p. m.	——, 8 a. m. Physics I, 9 a. m. Algebra I, 10 a. m. Physical geography, 11 a. m. Physics laboratory, 2 to 5 p. m.	History of education, 8 a. m. Physics II, 9 a. m. Algebra II, 10 a. m. English III, 11 a. m. Physics laboratory, 2 to 5 p. m.
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Third year.

Manual training I, 8 a. m. Philosophy of education, 9 a. m. Algebra III, 10 a. m. Elements of agriculture II, 11 a. m. Shop (manual training IV), p. m.	Geometry I, 8 a. m. Manual training II, 9 a. m. Methods, 10 a. m. Elements of agriculture III, 11 a. m. Horticulture, 2 to 5 p. m.	Geometry II, 8 a. m. Manual training III, 9 a. m. Botany II, 10 a. m. Elements of agriculture IV, 11 a. m. Botany, 2 to 5 p. m. Horticulture, 2 to 5 p. m. Agriculture, 3 to 5 p. m.
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CONNECTICUT AGRICULTURAL COLLEGE.

The Connecticut Agricultural College has for several years offered a two-year course of preparation for the special teaching of nature study in the public schools. The course is offered to graduates of high schools and to those who have had the first two years of their regular course in agriculture or in home making. This course "for rural school teaching" includes much work in agricultural subjects, selected from the regular courses in the college. It is intended to be supplemented by the work for teachers in the summer school, and by one year in a good normal school.

WASHINGTON (STATE) AGRICULTURAL COLLEGE.

In addition to the regular courses in the college at Pullman, Washington, courses are offered in education, specially intended to train teachers in methods. Whenever a student expresses a desire to engage in school teaching, he is encouraged to elect at least two courses in the department of education. One of these courses is "the principles of education," the other "methods of teaching agriculture." The latter is taught largely by the department of agriculture itself.

The above examples constitute the only instances known to the writer of agricultural colleges, or agricultural departments of colleges, in the United States that have actually put pedagogical courses or departments into operation, although other colleges or departments are each cooperating more or less with the education department of the university or college of which it is a part. Several of the colleges of agriculture are now considering the establishing of education courses. It is probable that such courses will constitute the most marked departure in agricultural college work in the immediate future. As yet the whole subject is in a formative and experimental stage. These colleges have a very large and varied constituency, and they properly represent all the phases of country life. It is incumbent on them to reach directly the educational phase, and it is incumbent on the people to see that they are able to enter this field, for this is a necessary condition to the evolution of the public schools.

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Stevens, F. L. A course in nature study for the teacher. State superintendent public instruction, Raleigh, N. C., 1905. p. 32.

The training of teachers for rural schools. *Western journal of education*, 11: 188-190, March, 1906.

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True, A. C. Notes on the history of agricultural pedagogy in the United States. Delivered at twenty-eighth annual meeting of the Society for the promotion of agricultural science, 1907. [1907.] Cover title. 23 p. 8°.

United States. Bureau of education. Gardeners' schools in Russia. Report of the Commissioner for the year 1897-98, v. 2, p. 1623-1639.

From advance sheets of U. S. Consular reports.

——— Instruction in agriculture in rural schools of France. Report of the Commissioner for the year 1897-98, v. 2, p. 1614-1620.

——— Department of agriculture. Office of experiment stations. The teaching of agriculture in the rural common schools. [Washington, Government printing office, 1904.] 20 p. 8°. (Circular of information no. 60.) Caption title.

This ninth report of the committee on methods of teaching agriculture of the association of American agricultural colleges and experiment stations was presented to the convention of the association held at Des Moines, Iowa, November 1-3, 1904. For previous reports see U. S. Dept. Agr. Office of experiment stations. Bulletins 41, p. 57; 49, p. 29; 65, p. 79; 76, p. 39; 99, p. 86; 115, p. 59; 123, p. 45; 142, p. 63, and Circulars 32, 37, 39, 41, 45, 49, and 55.

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7-11-10
UNITED STATES BUREAU OF EDUCATION
BULLETIN, 1908: NO. 2

WHOLE NUMBER 385

LIST OF PUBLICATIONS
OF THE
UNITED STATES BUREAU OF EDUCATION
1867-1907



WASHINGTON
GOVERNMENT PRINTING OFFICE
1908

BULLETIN OF THE BUREAU OF EDUCATION.

1906.

- No. 1. The Education Bill of 1906 for England and Wales, as it passed the House of Commons. By Anna Tolman Smith, of the Bureau of Education. 2d edition, 1907. pp. 39.
- No. 2. German views of American education, with particular reference to industrial development. Collated from the Reports of the Royal Prussian Industrial Commission of 1904. By William N. Hailmann, Professor of the History and Philosophy of Education, Chicago Normal School. 2d edition, 1907. pp. 55.
- No. 3. State school systems: Legislation and judicial decisions relating to public education, October 1, 1904, to October 1, 1906. By Edward C. Elliott, Professor of Education in the University of Wisconsin. 2d edition, revised, 1907. pp. 156.

1907.

- No. 1. The continuation school in the United States. By Arthur J. Jones, Fellow in Education, Teachers College, Columbia University. pp. 157.
- No. 2. Agricultural education, including nature study and school gardens. By James Ralph Jewell, sometime Fellow of Clark University. 2d edition, revised, 1908. pp. 148.
- No. 3. The auxiliary schools of Germany. Six lectures by B. Maennel, Rector of Mittelschule in Halle. Translated by Fletcher Bascom Dresslar, Associate Professor of the Science and Art of Teaching, University of California. pp. 137.
- No. 4. The elimination of pupils from school. By Edward L. Thorndike, Professor of Educational Psychology, Teachers College, Columbia University. pp. 63.

1908.

- No. 1. On the training of persons to teach agriculture in the public schools. By Liberty Hyde Bailey, Director of the New York State College of Agriculture, at Cornell University. pp. 53.

UNITED STATES BUREAU OF EDUCATION

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LIST OF PUBLICATIONS

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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, May 13, 1908.

SIR: I have the honor to transmit herewith a list of publications of the United States Bureau of Education for the years 1867 to 1907, prepared under the direction of the present librarian of the Bureau, and to recommend that it be published as one of the issues of the Bulletin of this Office.

This list is intended to make the publications of the Bureau better known and to facilitate their use. It should be of service to librarians and to students of special educational problems. I am particularly desirous that so far as possible complete sets of the serial publications of this Office should be found in all of the larger reference libraries, in order that they may be made as widely and immediately useful as they can be made in all parts of the country. This publication will undoubtedly further such distribution and use of the documents referred to, and will answer many of the special inquiries which come from time to time to this Office.

While many of these publications are out of print, it not infrequently happens that additional copies of such numbers are received at the library of the Bureau from various sources and so become available for redistribution. In view of such experience it has not been thought best to designate any of these publications as definitely "out of print." In a few instances, however, not even a single copy is to be found in this library. All such issues are indicated by an asterisk (*).

A more detailed index of the Annual Reports of the Commissioner of Education is now in preparation.

Very respectfully,

ELMER ELLSWORTH BROWN,
Commissioner.

The SECRETARY OF THE INTERIOR.

LIST OF PUBLICATIONS OF THE UNITED STATES BUREAU OF EDUCATION 1867-1907.^a

I.—ANNUAL STATEMENTS OF THE COMMISSIONER.

1.	1887 (Dawson) Washington, 1887. 26 p.	328
—.	1888 No statement issued.	
2.	1888-9 (Dawson) Washington, 1889. 19 p.	327
3.	1890 (Harris) Washington, 1890. 17 p.	168
4.	1891 (Harris) Washington, 1891. 21 p.	180
5.	1892 (Harris) Washington, 1892. 21 p.	189
6.	1893 (Harris) Washington, 1893. 25 p.	204
7.	1894 (Harris) Washington, 1894. 29 p.	213
8.	1895 (Harris) Washington, 1895. 27 p.	219
9.	1896 (Harris) Washington, 1896. 31 p.	230
10.	1897 (Harris) Washington, 1897. 35 p.	235
11.	1898 (Harris) Washington, 1898. 32 p.	245
12.	1899 (Harris) Washington, 1899. 47 p.	259
13.	1900 (Harris) Washington, 1900. 49 p.	266
14.	1901 (Harris) Washington, 1901. 45 p.	277
15.	1902 (Harris) Washington, 1902. 41 p.	285
16.	1903 (Harris) Washington, 1903. 39 p.	333
17.	1904 (Harris) Washington, 1904. 39 p.	344
18.	1905 (Harris) Washington, 1905. 48 p.	351
19.	1906 (Brown) Washington, 1906. 42 p.	362
20.	1907 (Brown) Washington, 1907. 18 p.	378

II.—ANNUAL REPORTS.

21.	1867-68 (Barnard) Washington, 1868. xl, 865 p.	1
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Official circulars and documents are appended to a few copies of this report and not to the entire edition. The report without the circulars was also printed as 40th Cong., 2d session. House ex. doc. 299.

Separates.

22.	*Circular.	1-1
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CONTENTS: [Plan of monthly circular.]—Education, a national interest: memorial of state and city superintendents of schools.—An act to establish a department of education.—Schedule of information sought by the Commissioner. (Official circular no. 1.)

^a The serial number precedes each entry; the publication number (in heavy-faced type) follows the entry. Publications should be ordered by publication number. Starred publications (*) are not found in the library of the Bureau.

Separates, 1867-68—Continued.

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| 23. | *Circular respecting plan of publication. | 1-2 |
| | CONTENTS: [Plan of publication.]—The American journal of education, documentary history.—Classified index to Barnard's American journal of education V. 1-16.—Education, a national interest: 1. Historical development; 2. Speech of James A. Garfield on a bill "To establish a national Bureau of education." (Official circular no. 2.) | |
| 24. | [Educational land policy of the United States.] August 1867, 78 p. (Official circular no. 3.) | 1-3 |
| | Varies slightly from the original. | |
| 25. | [Constitutional provision respecting education in each state,] 79-124 p. (Official circular 4-5.) | 1-4 |
| —. | Same. Supplement 125-136 p. | — |
| 26. | *[National land grants for educational purposes. Supplement.] State colleges and schools of science applied to agriculture and the mechanic arts. 129-310 p. (Official circular no. 6.) | 1-5 |
| 27. | *The state and education and systems of public instruction. 311-368 p. (Official circular no. 7.) | 1-6 |
| 28. | Education of girls. 369-400 p. (Official circular no. 8.) | 1-7 |
| —. | Report on female education. 367-384 p. (Official circular no. 8.) | — |
| 29. | Circular respecting academies and other institutions of secondary education. 401-432 p. (Official circular no. 9.) | 1-8 |
| 30. | [*Academies and secondary education; secondary education in Prussia.] 433-522 p. (Official circular no. 10.) | 1-9 |
| 31. | *School architecture. Part II. Plans for graded schools 1868. 513-648 p. (Official circular no. 11.) | 104 |
| —. | Report on school architecture and plans for graded schools; by the Commissioner of education. Washington, 1870. 513-648 p. (Official circular no. 11.) | — |
| —. | Same. Washington, 1871. 513-648 p. (Official circular no. 11.) | — |
| 32. | [*State normal schools, and other institutions for the professional training of teachers.] 649-820 p. (Official circular no. 12.) | 1-10 |
| 33. | *August, 1868. 8, ix-lx p. | 1-11 |
| | CONTENTS: Letter to editors and publishers of newspapers.—Educational meetings in August, 1868.—Plan of publication adopted by the Commissioner.—Circular respecting reports and documents for 1868.—Contents of special report on public schools in the District of Columbia and the principal cities of the U. S.—Index to subjects discussed in general report and documents.—Report of Commissioner of education, 1867-68, etc. (Official circular no. 13.) | |
| 34. | What is education? Opinions of eminent men. Washington, 1870. 16 p. | 1-12 |
| | 1869 No report issued. | |
| 35. | 1870 (Eaton) Washington, 1870. 579 p. | 3 |
| | Printed also as 41st Cong. 3d session. House ex. doc. 1, pt. 4. | |
| 36. | 1871 (Eaton) Washington, 1872. 715 p. | 4 |
| | Printed also as 42d Cong. 2d session. House ex. doc. 1, pt. 5. | |

Separate, 1871.

37. Report on the national schools of science; by D. C. Gilman. **314**
Washington, 1872. 20 p.
38. 1872 (Eaton) Washington, 1873. lxxxviii, 1018 p. **5**
Printed also as 42d Cong. 3d sess. House ex. doc. 1, pt. 5.
39. 1873 (Eaton) Washington, 1875. clxxviii, 870 p. **6**
Printed also as 43d Cong. 1st sess. House ex. doc. 1, pt. 5.
40. 1874 (Eaton) Washington, 1875. clli, 935 p. **7**
Printed also as 43d Cong. 2d sess. House ex. doc. 1, pt. 5.
41. 1875 (Eaton) Washington, 1876. clxxviii, 1016 p. **8**
Printed also as 44th Cong. 1st sess. House ex. doc. 1, pt. 5.
42. 1876 (Eaton) Washington, 1878. cccxlii, 942 p. **9**
Printed also as 44th Cong. 2d sess. House ex. doc. 1, pt. 5.

Separates.

43. The study of Anglo-Saxon by F. A. March. Washington, **320**
1876? 475-579 p.
Cover-title.
44. Latin pronunciation; by W. G. Richardson. Washington, **321**
1876? 484-497 p.
Cover-title.
45. The pronunciation of Greek in this country; by James R. **322**
Boise. Washington, 1876? 480-483 p.
Cover-title.
46. 1877 (Eaton) Washington, 1879. ccvi, 644 p. **10**
Printed also as 45th Cong. 2d session. House ex. doc. 1, pt. 5.
47. 1878 (Eaton) Washington, 1880. ccl, 730 p. **11**
Printed also as 45th Cong. 3d session. House ex. doc. 1, pt. 5.
48. 1879 (Eaton) Washington, 1881. ccxxx, 757 p. **12**
Printed also as 46th Cong. 2d session. House ex. doc. 1, pt. 5.
49. 1880 (Eaton) Washington, 1882. cclxii, 914 p. **13**
Printed also as 46th Cong. 3d session. House ex. doc. 1, pt. 5.
50. 1881 (Eaton) Washington, 1883. ccclxxvii, 840 p. **14**
Printed also as 47th Cong. 1st session. House ex. doc. 1, pt. 5.
51. 1882-83 (Eaton) Washington, 1884. ccxcviii, 872 p. **15**
Printed also as 47th Cong. 2d session. House ex. doc. 1, pt. 5.
52. 1883-84 (Eaton) Washington, 1885. cclxxi, 943 p. **16**
Printed also as 48th Cong. 2d session. House ex. doc. 1, pt. 5.
53. 1884-85 (Eaton) Washington, 1886. ccxvii, 848. **17**
Printed also as 49th Cong. 1st session. House ex. doc. 1, pt. 5.

Separate.

54. Statistics of public libraries in the United States. **143**
Washington, 1886. ccxxix-ccxxx, 691-782 p.
55. 1885-86 (Dawson) Washington, 1887. xxi, 792 p. **18**
Printed also as 49th Cong. 2d session. House ex. doc. 1, pt. 5.
56. 1886-87 (Dawson) Washington, 1888. 1170 p. **19**
Printed also as 50th Cong. 1st session. House ex. doc. 1, pt. 5.
57. 1887-88 (Dawson) Washington, 1889. 1209 p. **20**
Printed also as 50th Cong. 2d session. House ex. doc. 1, pt. 5.

58. 1888-89 (Harris) Washington, 1891. V. 1, ix., 600 p. 181
 —. Same. V. 2, vi, 67-1600 p. 182
 Printed also as 51st Cong. 1st session. House ex. doc. 1, pt. 5.
Separates.
59. Part I of the Report of the Commissioner of education for 1888-89 with the Commissioner's introduction and table of contents of Parts I, II, III. Special edition. Washington, 1891. lix, 274 p. 183
60. Chapter 24. Report of the general agent of education in Alaska for the year 1888-89; [by] Sheldon Jackson. Washington, 1891, 753-764 p. 184
 Cover-title.
61. Chapter 35. Publications of the United States Bureau of education from 1867 to 1890 with subject-index. Washington, 1891. 1453-1551 p. 185
62. 1889-90 (Harris) Washington, 1893. V. 1, xxvii, 601 p. 198
 —. Same. V. 2, vii, 603-1724 p. 199
 Printed also as 51st Cong. 2d session. House ex. doc. 1, pt. 5.
Separates.
63. V. 2, Chapter 17. Education in Alaska, 1889-90; [by] Sheldon Jackson. 1245-1300 p. 191
64. 1890-91 (Harris) Washington, 1894. V. 1, xxx, 654 p. 207
 —. Same. V. 2, 655-1549 p. 208
 Printed also as 52d Cong. 1st session. House ex. doc. 1, pt. 5.
Separates.
65. Chapters 1-4. Report on legal education, prepared by a committee of the American bar association and the U. S. Bureau of education. Washington, 1893. 207 p. 190
 Advance sheets of Chapters 13-16 of Annual report 1890-91, p. 376-578.
66. Chapter 24. Education in southwestern Virginia, 1890-91; by A. D. Mayo. Washington, 1894. 881-921 p. 206
67. Chapter 25. Education in Alaska, 1890-91; [by] Sheldon Jackson. Washington, 1893. 923-960 p. 203
68. 1891-92 (Harris) Washington, 1894. V. 1, xxviii, 636 p. 211
 —. Same. V. 2, v, 637-1294 p. 212
 Printed also as 52d Cong. 2d session. House ex. doc. 1, pt. 5.
Separates.
69. *Chapter 4. Classification in graded schools. 1892. 240
70. Chapter 28. Education in Alaska, 1891-92; [by] Sheldon Jackson. Washington, 1894. 873-892 p. 214
71. 1892-93. (Harris) Washington, 1895. V. 1, lx., 1224 p. 217
 —. Same. V. 2, v, 1225-2153 p. 218
 Printed also as 53d Cong. 2d sess. House ex. doc. 1, pt. 5.
Separates.
72. Part II, Chapters 1-8. Education at the World's Columbian exposition, including reports and comments by American and foreign educators and delegates. Washington, 1896. 423-690 p. 223
73. Part II, Chapter 9. Papers prepared for the World's library congress held at the Columbian exposition; ed. by Melvil Dewey. Washington, 1896. 691-1014 p. 224
74. Part II, Chapter 10. Notes on education at the Columbian exposition; by John Eaton. Washington, 1896. 1015-1224 p. 225

Separates, 1892-93—Continued.

75. Part III, Chapter 9. Education in Alaska, 1892-93; [by Sheldon Jackson. Washington, 1895. 1705-1748 p. 220
Cover-title.

76. 1893-94 (Harris) Washington, 1896. V. 1, xlvii, 1061 p. 221
— Same. V. 2, 1063-2290 p. 222

Printed also as 53d Cong. 3d session. House ex. doc. 1, pt. 5.

Separates.

77. *Chapter 9. Digest of the laws regulating the administration, character and finances of the public school systems of the states of the Union. By Wellford Addis. 1898. 237

78. Chapter 15. Educational values; [by W. T. Harris.] Washington, 1904. 617-638 p. 250
Cover-title.

79. Part II, Chapter 12. Education in Alaska, 1893-94; [by Sheldon Jackson. Washington, 1896. 1451-1492 p. 221-1

80. Part II, Chapter 13. Preliminary list of American learned and educational societies; by Stephen B. Weeks. Washington, 1896. 1493-1661 p. 221-2
Cover-title.

81. Part II, Chapters 14-15. Education and patho-social studies. Washington, 1896. 1663-1699, 573-590 p. 226
[Includes also Chapter 18, from Report for 1889-90.]

82. 1894-95 (Harris) Washington, 1896. V. 1, lvii, 1152 p. 227
— Same. V. 2, v, 1153-2314 p. 228

Printed also as 54th Cong. 1st session. House ex. doc. 5.

Separates.

83. Public high schools and private secondary schools in the United States. Washington, 1896. 19-105, 1890-2113 p. 227-1

84. Chapter 10. Education in central Europe. Washington, 1896. 321-473 p. 227-2

85. Chapters 19-21. Chautauqua; [by Herbert B. Adams.] Pensions for teachers. Coeducation, compulsory attendance, American students in foreign universities, continuation and industrial schools. Washington, 1896. 977-1125 p. 227-3

86. Chapter 33. Education in Alaska, 1894-95; [by] Sheldon Jackson. Washington, 1896. 1425-1455 p. 231

87. 1895-96 (Harris) Washington, 1897. V. 1, lxxv, 965 p. 233
— Same. V. 2, vii, 967-2173 p. 234

Printed also as 54th Cong. 2d session. House doc. 5.

Separates.

88. Introductory statement of the Commissioner of education for the report of 1895-96. With statistics of common schools. Washington, 1897. lxxv p. 233-1

89. Chapter 1. Laws relating to city school boards; [by James C. Boykin.] Washington, 1897. 78 p. 233-2

90. Chapters 8-9. Statistics of libraries and library legislation in the United States. Washington, 1897. 339-599 p. 232

91. Chapter 12. Education in Mexico and Central America; [by F. F. Hilder.] Washington, 1897. 641-667 p. 233-3

92. Chapter 13. The fifth International prison congress; [by C. D. Randall.] Washington, 1897. 669-700 p. 233-4

93. Chapter 15. Commercial education in Europe, particularly in Austria, France, and Germany; [by Edmund J. James.] Washington, 1897. 721-837 p. 233-5

Separates, 1895-96—Continued.

94. Chapter 17. Horace Mann. Washington, 1897. 887-927 p. **233-6**
95. Chapter 18. Correlation of studies. Washington, 1897. **233-7**
929-938 p.
96. Chapter 19. Educational directory. Washington, 1897. **233-8**
939-965 p.
97. Chapter 20. Education in Sweden and Iceland. Washing- **233-9**
ton, 1897. 967-1000 p.
Cover-title.
98. Chapter 21. Typical institutions offering manual and in- **233-10**
dustrial training; [compiled by James C. Boykin.]
Washington, 1897. 1001-1152 p.
Caption-title.
99. Chapter 22. Higher and secondary education in the United **233-11**
States as reported by Gabriel Comparé. Washington,
1897. 1153-1174 p.
Cover-title.
100. Chapter 23. Mental fatigue in school. Washington, 1897. **233-12**
1175-1198 p.
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101. Chapter 24. Instruction in agriculture in Prussia and **233-13**
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102. Chapter 25. Industrial education in Germany, Austria, and **233-14**
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104. Chapter 27. Colleges of agriculture and the mechanic arts; **233-16**
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176. Chapter 11. The organization and reconstruction of state systems of common-school education in the north Atlantic states from 1830 to 1865; by A. D. Mayo. Washington 1899. 355-486 p.
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183. Chapters 21-25. Experimental study of children, including anthropometrical and psycho-physical measurements of Washington school children and a bibliography; by Arthur MacDonald. Washington, 1899. 987-1204, 1281-1390 p. 248
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225. Chapter 10. Minor mental abnormalities in children as 260-10
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234. Chapter 19. Bird's-eye view of the St. Louis public school 260-18
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247. Chapter 35. Current questions. Washington, 1900. 1475- 260-30
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258. Chapter 48. Contributions to the history of normal schools 260-40
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264. Chapter 2. The development of English secondary schools for boys; by Dr. Ph. Aronstein. Washington, 1901. 45-84 p. 275-3
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269. Chapter 7. The organization and development of the American common school in the Atlantic and central states of the South, 1830 to 1860; by A. D. Mayo. Washington, 1901. 427-561 p. 275-8
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270. Chapter 8. Papers read at Chicago meeting of Department of superintendence, 1900. Washington, 1901. 563-602 p. 275-9
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271. Chapter 9. The rôle of the school-teacher in the struggle against alcoholism; [by A. Sluys.] Washington, 1901. 603-614 p. 275-10
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272. Chapter 10. Readjustment of the collegiate to the professional course; [by Simeon E. Baldwin.] Washington, 1901. 615-628 p. 275-11
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278. Chapter 16. The Old South work; [by Edwin D. Mead.] Washington, 1901. 905-921 p.
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283. Chapter 22. Contributions to the history of the Hopkins grammar school, New Haven, Connecticut, 1660 to 1900; [compiled by H. K. Willard.] Washington, 1901. 1281-1296 p. 275-21
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285. Chapter 24. The legislative career of Justin S. Morrill; [by George W. Atherton.] Washington, 1901. 1321-1335 p. 275-23
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295. Chapter 38. Statistics of normal schools. Washington, 275-30
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361. Chapter 18. Illiteracy of the voting population in the 329-19
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416. Chapter 26. Courses of study in German schools. Washington, 1904. 841-27
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420. Chapter 30. Miscellaneous educational topics. Washington, 1904. 841-31
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421. Chapter 31. Biographical notices. Washington, 1904. 841-32
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422. Chapter 32. Statistics of city school systems. Washington, 1904. 841-33
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426. Chapter 36. Statistics of normal schools. Washington, 1904. 1753-1811 p.
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451. Chapter 14. Education at the St. Louis exposition. (I. 356-13
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475. Chapter 39. Miscellaneous educational topics. Washington, 1906. 2421-2452 p.
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CONTENTS: The measure of a teacher's efficiency; by Edwin P. Seaver.—The college woman; by Edward A. Pace.—Old and new methods of teaching; by Ernestina A. Lopez.—Practical and industrial education in the Argentine Republic; by J. B. Zubiaur.—Sir Isaac Pitman and his services to phonography; by Benn Pitman.

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479. Chapter 2. Extracts from Report of the Mosely educational commission to the United States, October-December 1903. Washington, 1907. 11-39 p.
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480. Chapter 3. Statement of proceedings to execute the Rhodes scholarship trust. Washington, 1907. 41-55 p.
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482. Chapter 5. Teaching agriculture in schools of France and 365-6
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483. Chapter 6. Higher education for business men in United 365-7
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484. Chapter 7. Education in Liberia; by George W. Ellis. 365-8
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CONTENTS: Instruction in forestry.—The American system
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Jackson.] Washington, 1907. 267-282 p.
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491. Chapter 14. Reindeer in Alaska; [by Sheldon Jackson.] 365-15
Washington, 1907. 283-291 p.
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492. Chapter 15. Inauguration of the American school system 365-16
in Porto Rico; by Samuel McCune Lindsay. Washing-
ton, 1907. 293-344 p.
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493. Chapter 16. Education in the Philippine Islands. Wash- 365-17
ington, 1907. 345-364 p.
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494. Chapter 17. Educational directory. Washington, 1907. 365-18
365-396 p.
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Separates, 1905—Continued.

495. Chapter 18. Statistics of state school systems. Washing- **365-19**
ton, 1907. 397-427 p.
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496. Chapter 19. Statistics of city school systems. Washington, **365-20**
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497. Chapter 20. Universities, colleges, and technological **365-21**
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Cover-title.
498. Chapter 21. Agricultural and mechanical colleges. Wash- **365-22**
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Cover-title.
499. Chapter 22. Professional schools. Washington, 1907. 709- **365-23**
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500. Chapter 23. Statistics of normal schools. Washington. **365-24**
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501. Chapter 24. Statistics of secondary schools. Washington, **365-25**
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502. Chapter 25. Manual and industrial training. Washington, **365-26**
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Cover-title.
503. Chapter 26. Commercial and business schools. Washing- **365-27**
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504. Chapter 27. Schools for nurses. Washington, 1907. 1257- **370**
1292 p.
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505. Chapter 28. Schools for the colored race. Washington, **365-28**
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506. Chapter 29. Statistics of reform schools. Washington, **365-29**
1907. 1329-1345 p.
Cover-title.
507. Chapter 30. Schools for the defective classes. Washington, **365-30**
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508. 1906 (Brown) Washington, 1907-08. V. 1, xlvii, 643 p. **374**
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509. The Commissioner's introduction. Washington, 1907. vii- **374-1**
xxxvi p.
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510. Publications of the United States Bureau of education **372**
from 1867 to 1906. Washington, 1907. xxxvii-xlvii p.
511. Chapter 1. Education in Great Britain and Ireland, 1904- **374-2**
1906. Washington, 1907. 17 p.
Cover-title.

Separates, 1906—Continued.

512. Chapter 2. Education in France. Washington, 1907. **374-3**
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513. Chapter 3. The new Prussian school law of 1906. Wash- **374-4**
ington, 1907. 35-72 p.
Cover-title.
514. Chapter 4. Progress of education in Italy; by Will S. **374-5**
Monroe. Washington, 1907. 73-90 p.
Cover-title.
515. Chapter 5. Foreign universities and other foreign institu- **374-6**
tions of higher education in 1906 (list). Washington,
1907. 91-122 p.
Cover-title.
516. Chapter 6. Public education in British India. Washington, **374-7**
1907. 123-140 p.
Cover-title.
517. Chapter 7. Education in the Philippines and in Cuba. **374-8**
Washington, 1907. 141-153 p.
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518. Chapter 8. The education and professional position of **374-9**
nurses; by M. Adelaide Nutting. Washington, 1907.
155-205 p.
Cover-title.
519. Chapter 9. Current topics, Washington, 1907. 207-235 p. **374-10**
Cover-title.
520. Chapter 10. Report on education in Alaska and the intro- **374-11**
duction of reindeer; [by Sheldon Jackson.] Washing-
ton, 1907. 237-255 p.
Cover-title.
521. Chapter 11. Educational periodicals. Washington, 1907. **374-12**
257-261 p.
Cover-title.
522. Chapter 12. Educational directory. Washington, 1907. **374-13**
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523. Chapter 13. Statistics of state school systems. Washing- **374-14**
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524. Chapter 14. Statistics of city school systems. Washing- **374-15**
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525. Chapter 15. Universities, colleges, and technological schools. **374-16**
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526. Chapter 16. Agricultural and mechanical colleges. Wash- **374-17**
ington, 1907. 565-592 p.
Cover-title.
527. Chapter 17. Professional education. Washington, 1907. **374-18**
593-643 p.
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III.—CIRCULARS OF INFORMATION.*

528. 1870 August. Illiteracy, derived from census tables of 1860; Educational statistics, translation from an article by Dr. A. Ficker; School-room diseases, translation from an article by Dr. R. Virchow; Education of French and Prussian conscripts; School organization, etc. Washington, 1870. 70 p.
[Supplied-title.] 21
529. 1871 July. Report on the systems of public instruction in Sweden [by C. C. Andrews], and Norway [by Gerhard Gade.] Washington, 1871. 48 p. 22
530. 1871 November. Methods of school discipline; [by Hiram Orcutt] Washington, 1871. 14 p. 23
- The discipline of the school; [by Hiram Orcutt], Washington, 1881.. 15 p. 125
Cover-title.
531. 1871 December. Compulsory education; [by L. Van Bokkelen.] Washington, 1872. 17 p. 24
532. 1872 January. German and other foreign universities; [by Herman Jacobson.] Washington, 1872. 43 p. 25
533. 1872 February. Reports on the systems of public instruction in Greece [by John M. France]; The Argentine Republic; Chili, and Ecuador; with statistics of Portugal and Japan, and an official report on technical education in Italy. Washington, 1872. 77 p. 26
534. 1872 March. 1. An inquiry concerning the vital statistics of college graduates; [by Charles Warren.] 2. Distribution of college students in 1870-71; [by Charles Warren.] 3. Facts of vital statistics in the United States with tables and diagrams; [by J. M. Toner.] Washington, 1872. 93 p. 27
535. 1872 April. The relation of education to labor. Washington, 1872. 125 p. 28
536. 1872 June. Education in the British West Indies; [by Thomas H. Pearne.] Washington, 1872. 22 p. 29
537. 1872 July. The kindergarten. Washington, 1872. 62 p. 30
- CONTENTS: Kindergarten in Italy; by Elizabeth P. Peabody.—The philosophy and methods of the kindergarten; by Baroness Marenholtz Bulow.—Kindergarten in Belgium, introduction to practical treatise on kindergarten; by Octavie Masson.
538. 1872 November. American education at the International exposition to be held at Vienna in 1873. 79 p. 31
539. 1873 no. 1. Historical summary and reports on the systems of public instruction in Spain, Bolivia, Uruguay, and Portugal. Washington, 1873. 66 p. 32
540. 1873 no. 2. Schools in British India; [by Joseph Warren.] Washington, 1873. 30 p. 33
541. 1873 no. 3. Account of college commencements for the summer of 1873, in Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania. Washington, 1873. 118 p. 34

* Official circulars 1-13 were published as reprints of the Annual report for 1867-68.

542. 1873 no. 4. List of publications by members of certain college-faculties and learned societies in the United States, 1867-1872. Washington, 1873. 72 p. **35**
543. 1873 no. 5. Account of college-commencements during 1873 in the western and southern states. Washington, 1873. 155 p. **36**
544. 1874 no. 1. Proceedings of the Department of superintendence of the National educational association. Washington, 1874. 77 p. **37**
545. 1874 no. 2. Drawing in public schools. The present relation of art to education in the United States; [by I. Edwards Clarke.] Washington, 1874. 56 p. **38**
546. 1874 no. 3. History of secondary instruction in Germany; [compiled by Herman Jacobson.] Washington, 1874. 87 p. **39**
547. 1875 no. 1. Proceedings of the Department of superintendence of the National educational association, at Washington, D. C., January 27 and 28, 1875. Washington, 1875. 114 p. **40**
548. Education at the Centennial. Washington, 1875. 27 p. **40-1**
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549. 1875 no. 2. Education in Japan. Washington, 1875. 64 p. **41**
550. 1875 no. 3. An account of the systems of public instruction in Belgium, Russia, Turkey, Servia and Egypt. Washington, 1875. 108 p. **42**
CONTENTS: Education in Belgium.—The progress of education in Russia; by Emile de Laveleye.—Education in Turkey; by M. de Salve.—Education in Servia.—Public instruction in Egypt.
551. 1875 no. 4. Waste of labor in the work of education; by P. A. Chadbourne. Washington, 1875. 16 p. **43**
552. 1875 no. 5. Suggestions respecting the educational exhibit at the International centennial exhibition, 1876. Washington, 1875. 26 p. **44**
553. 1875 no. 6. Statements relating to reformatory, charitable, and industrial schools for the young. Washington, 1875. 208 p. **45**
554. 1875 no. 7. Constitutional provisions in regard to education in the several states of the American union; [by Franklin Hough.] Washington, 1875. 130 p. **46**
555. 1875 no. 8. Schedule for the preparation of students' work for the Centennial exhibition, as reported by the committee of the Department of superintendence of the National educational association, appointed at Minneapolis in 1875. Washington, 1875. 15 p. **47**
556. 1877 no. 1. Report on the system of public instruction in China; [by William A. P. Martin.] Washington, 1877. 28 p. **48**
557. 1877 no. 2. Reports on the systems of public instruction in Finland [by Felix Heikel]; the Netherlands [by C. H. Plugge]; Denmark; Württemberg [by J. L. Cornig]; and Portugal; with a paper on the University of Leipzig [by John H. Steuart]. Washington, 1877. 77 p. **49**
558. 1878 no. 1. The training of teachers in Germany. Washington, 1878. 36 p. **50**
559. 1878 no. 2. Elementary education in London, [with address of Sir Charles Reed.] Washington, 1878. 24 p. **51**
560. 1879 no. 1. Training schools for nurses. Washington, 1879. 21 p. **52**

561. 1879 no. 2. Papers, addresses, discussions, and other proceedings of the Department of superintendence of the National educational association, at the meeting held at Washington, D. C., February 4, 5, and 6, 1879; the proceedings of the Department of superintendence of the National educational association for 1877; and the proceedings of the Conference of the presidents and other delegates of the state universities and state colleges of Ohio for 1877. Washington, 1879. 192 p. **53**

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562. An address on the needs of the Bureau of education; by John Eaton. Washington, 1879. 7 p. **308**
563. An address on the needs of education in the South; by Gustavus J. Orr. Washington, 1879. 13 p. **306**
564. An address on technical education and industrial drawing; by Walter Smith. Washington, 1879. 24 p. **313**
565. An address on national aid to education; by John Eaton. Washington, 1879. 37 p. **307**
566. An address on education at the Paris exposition; by John D. Philbrick. Washington, 1879. 9 p. **323**
567. 1879 no. 3. The value of common school education to common labor; by Dr. Edward Jarvis; together with illustrations of the same as shown by the answers to inquiries addressed to employers, workmen, and observers. Washington, 1879. 37 p. **54**
568. 1879 no. 4. Training schools of cookery. Washington, 1879. 49 p. **55**
569. 1879 no. 5. American education as described by the French commission to the International exhibition of 1876; [by Ferdinand Buisson and others.] Washington, 1879. 37 p. **56**
570. 1880 no. 1. College libraries as aids to instruction. Washington, 1880. 27 p. **57**
 CONTENTS: The college library; by Justin Winsor.—Rochester university library; by Otis H. Robinson.
571. 1880 no. 2. Proceedings of the Department of superintendence of the National educational association, at its meetings at Washington, D. C., February 18–20, 1880. Washington, 1880. 112 p. **58**
572. 1880 no. 3. Legal rights of children; [by S. M. Wilcox.] Washington, 1880. 96 p. **59**
573. 1880 no. 4. Rural school architecture, with illustrations; [by T. M. Clark.] Washington, 1880, 106 p. **60**
574. 1880 no. 5. English rural school; [by Henry W. Hulbert.] Washington, 1880. 26 p. **61**
575. 1880 no. 6. A report on the teaching of chemistry and physics in the United States; by Frank Wigglesworth Clarke. Washington, 1881. 219 p. **62**
576. 1880 no. 7. The spelling reform; [by F. A. March.] Washington, 1881. 36 p. **63**
577. 1881 no. 1. The construction of library buildings; [by William F. Poole.] Washington, 1881. 26 p. **64**
578. 1881 no. 2. The relation of education to industry and technical training in American schools; [by E. E. White.] Washington, 1881. 22 p. **65**

579.	1881 no. 3. Proceedings of the Department of superintendence of the National educational association at its meeting at New York, February 8-10, 1881. Washington, 1881. 79 p.	66
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580.	An address on our schools and our forests; by Franklin B. Hough. Washington, 1881. 18 p.	300
581.	An address on museums illustrative of education; by Hon. John Eaton. Washington, 1881. 12 p.	309
582.	1881 no. 4. Education in France. Washington, 1881. 144 p.	67
583.	1881 no. 5. Causes of deafness among school children and its influences on education, with remarks on the instruction of pupils with impaired hearing and on aural hygiene in the schools, by Samuel Sexton. Washington, 1881. 47 p.	68
584.	1881 no. 6. The effects of student life upon the eyesight; by A. W. Calhoun. Washington, 1881. 29 p.	69
585.	1882 no. 1. The inception, organization, and management of training schools for nurses. Washington, 1882. 28 p.	70
586.	1882 no. 2. Proceedings of the Department of superintendence of the National educational association at its meeting at Washington, March 21-23, 1882. Washington, 1882. 111 p.	71
587.	1882 no. 3. The University of Bonn; [by Edmond Dreyfus-Brisac.] Washington, 1882. 67 p.	72
588.	1882 no. 4. Industrial art in schools; by Charles G. Leland. Washington, 1882. 37 p.	73
589.	1882 no. 5. Maternal schools in France. Washington, 1882. 14 p.	74
590.	1882 no. 6. Technical instruction in France. Washington, 1882. 68 p.	75
591.	1883 no. 1. Legal provisions respecting the examination and licensing of teachers. Washington, 1883. 46 p.	76
592.	1883 no. 2. Coeducation of the sexes in the public schools of the United States. Washington, 1883. 30 p.	77
593.	1883 no. 3. Proceedings of the Department of superintendence of the National educational association at its meeting at Washington, February 20-22, 1883. Washington, 1883. 81 p.	78
594.	1883 no. 4. Recent school law decisions; compiled by Lyndon A. Smith. Washington, 1883. 82 p.	79
595.	1884 no. 1. Meeting of the International prison congress at Rome, in October, 1884. Washington, 1884. 11 p.	80
596.	1884 no. 2. The teaching, practice, and literature of shorthand; by Julius Ensign Rockwell. 2d. and enl. ed. Washington, 1885. 184 p.	81
—.	Additions to the teaching, practice, and literature of shorthand; [by Julius Ensign Rockwell.] Washington, 1885. 159-182 p.	81-1
597.	1884 no. 3. Illiteracy in the United States in 1870 and 1880, with diagrams and observations; by Charles Warren; with an appendix on national aid to education; by J. L. M. Curry. Washington, 1884. 99 p.	82
598.	1884 no. 4. Proceedings of the Department of superintendence of the National educational association at its meeting at Washington, February 12-14, 1884. Washington, 1884. 176 p.	83

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599.	Address on arbor day in the public schools; by J. B. Peaslee. Washington, 1884. 14 p.	88-1
600.	Address on the educational status and needs of the new South; by Robert Bingham. Washington, 1884. 21 p.	805
601.	1884 no. 5. Suggestions respecting the educational exhibit at the World's Industrial and cotton centennial exposition. Washington, 1884. 28 p.	84
602.	1884 no. 6. Rural schools; progress in the past; means of improvement in the future; [by Annie T. Smith.] Washington, 1884. 90 p.	85
603.	1884 no. 7. Aims and methods of the teaching of physics; by Charles K. Wead. Washington, 1884. 158 p.	86
604.	1885 no. 1. City school systems in the United States; by John D. Philbrick. Washington, 1885. 207 p.	87
605.	1885 No. 2. Teachers' institutes; [compiled by James H. Smart.] Washington, 1885. 206 p.	88
606.	1885 no. 3. A review of the reports of the British royal commissioners on technical instruction, with notes; by Charles O. Thompson. Washington, 1885. 55 p.	89
607.	1885 no. 4. Education in Japan; [prepared and translated by the Japanese department of education.] Washington, 1885. 56 p.	90
608.	1885 no. 5. Physical training in American colleges and universities; by Edward Mussey Hartwell. Washington, 1886. 183 p.	91
609.	1886 no. 1. The study of music in public schools. Washington, 1886. 78 p.	92
610.	1886 no. 2. Proceedings of the Department of superintendence of the National educational association at its meeting at Washington, February 23-26, 1886. Washington, 1886. 169 p.	93
611.	1887 no. 1. The College of William and Mary, a contribution to the history of higher education, with suggestions for its national promotion; by Herbert B. Adams. Washington, 1887. 89 p. (Contributions to American educational history, no. 1.)	94
612.	1887 no. 2. The study of history in American colleges and universities; by Herbert B. Adams. Washington, 1887. 290 p.	95
613.	1887 no. 3. Proceedings of the Department of superintendence of the National educational association at its meeting at Washington, March 15-17, 1887. Washington, 1887. 200 p.	96
614.	1888 no. 1. Thomas Jefferson and the University of Virginia; by Herbert B. Adams, with authorized sketches of Hampden-Sidney, Randolph-Macon, Emory-Henry, Roanoke, and Richmond colleges, Washington and Lee university, and Virginia military institute. Washington, 1888. 308 p. (Contributions to American educational history, no. 2.)	97
615.	1888 no. 2. The history of education in North Carolina; by Charles Lee Smith. Washington, 1888. 180 p. (Contributions to American educational history, no. 3.)	98
616.	1888 no. 3. History of higher education in South Carolina, with a sketch of the free school system; by Colyer Meriwether. Washington, 1889. 247 p. (Contributions to American educational history, no. 4.)	99
617.	1888 no. 4. Education in Georgia; by Charles Edgeworth Jones. Washington, 1889. 154 p. (Contributions to American educational history, no. 5.)	100

618. 1888 no. 5. Industrial education in the South; by A. D. Mayo. **101**
Washington, 1888. 86 p.
619. 1888 no. 6. Proceedings of the Department of superintendence
of the National educational association at its meeting in Wash- **102**
ington, February 14-16, 1888. Washington, 1888. 165 p.

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620. Alaska; by N. H. R. Dawson. Washington, 1889. 119- **102-1**
134 p.
621. 1888 no. 7. History of education in Florida; by George Gary **108**
Bush. Washington, 1889. 54 p. (Contributions to American ed-
ucational history, no. 6.)
622. 1889 no. 1. Higher education in Wisconsin; by William F. Allen **157**
and David E. Spencer. Washington, 1889. 68 p. (Contribu-
tions to American educational history, no. 7.)
623. 1889 no. 2. Proceedings of the Department of superintendence **160**
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ington, March 6-8, 1889. Washington, 1889. 300 p.

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624. Relation of manual training to body and mind; by C. M. **301**
Woodward. [Washington, 1889?] 26 p.
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625. 1889 no. 3. History of education in Alabama, 1702-1889; by **163**
Willis G. Clark. Washington, 1889. 281 p. (Contributions
to American educational history, no. 8.)
626. 1890 no. 1. The history of federal and state aid to higher **161**
education in the United States; by Frank W. Blackmar. Wash-
ington, 1890. 343 p. (Contributions to American educational
history, no. 9.)
627. 1890 no. 2. English-Eskimo and Eskimo-English vocabularies; **165**
compiled by Roger Wells and John W. Kelly; preceded by ethno-
graphical memoranda concerning the Arctic Eskimos in Alaska
and Siberia; by John W. Kelly. Washington, 1890. 72 p.
628. 1890 no. 3. The teaching and history of mathematics in the **167**
United States; by Florian Cajori. Washington, 1890. 400 p.
629. 1891 no. 1. Higher education in Indiana; by James Albert **170**
Woodburn. Washington, 1891. 200 p. (Contributions to Amer-
ican educational history, no. 10.)
630. 1891 no. 2. The fourth International prison congress, St. **171**
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631. 1891 no. 3. Sanitary conditions for schoolhouses; by Albert P. **173**
Marble. Washington, 1891. 123 p.
632. 1891 no. 4. History of higher education in Michigan; by **174**
Andrew C. McLaughlin. Washington, 1891. 179 p. (Con-
tributions to American educational history, no. 11.)
633. 1891 no. 5. The history of higher education in Ohio; by George **175**
W. Knight and John R. Commons. Washington, 1891. 258 p.
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634. 1891 no. 6. History of higher education in Massachusetts; by **176**
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635. 1891 no. 7. Promotions and examinations in graded schools; **177**
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636. 1891 no. 8. Rise and growth of the normal-school idea in the United States; by J. P. Gordy. Washington, 1891. 145 p. 178
637. 1891 no. 9. Biological teaching in the colleges of the United States; by John P. Campbell. Washington, 1891. 183 p. 179
638. 1892 no. 1. Southern women in the recent educational movement in the South; by A. D. Mayo. Washington, 1892. 300 p. 186
639. 1892 no. 2. Benjamin Franklin and the University of Pennsylvania; ed. by Francis Newton Thorpe. Washington, 1893. 450 p. 188
640. 1893 no. 1. Shorthand instruction and practice; by Julius Ensign Rockwell. Washington, 1893. 206 p. 192
641. 1893 no. 2. The history of education in Connecticut; by Bernard C. Steiner. Washington, 1893. 300 p. (Contributions to American educational history, no. 14.) 193
642. 1893 no. 3. The history of education in Delaware; by Lyman P. Powell. Washington, 1893. 186 p. (Contributions to American educational history, no. 15.) 194
643. 1893 no. 4. Abnormal man, being essays on education and crime and related subjects, with digests of literature and a bibliography; by Arthur MacDonald. Washington, 1893. 445 p. 195
644. 1893 no. 5. Higher education in Tennessee; by Lucius Salisbury Merriam. Washington, 1893. 287 p. (Contributions to American educational history, no. 16.) 196
645. 1893 no. 6. Higher education in Iowa; by Leonard F. Parker. Washington, 1893. 190 p. (Contributions to American educational history, no. 17.) 197
646. 1893 no. 7. Statistics of public libraries in the United States and Canada; by Weston Flint. Washington, 1893. 213 p. 201
647. 1893 no. 8. The spelling reform; by Francis A. March. A revision and enlargement of the author's pamphlet published by the U. S. Bureau of education in 1881. Washington, 1893. 86 p. 202
648. 1894 no. 1. History of higher education in Rhode Island; by William Howe Tolman. Washington, 1894. 210 p. (Contributions to American educational history, no. 18.) 209
649. 1894 no. 2. History of education in Maryland; by Bernard C. Steiner. Washington, 1894. 331 p. (Contributions to American educational history, no. 19.) 210
650. 1898 no. 1. The history of education in Louisiana; by Edwin Whitfield Fay. Washington, 1898. 264 p. (Contributions to American educational history, no. 20.) 242
651. 1898 no. 2. Higher education in Missouri; by Marshall S. Snow. Washington, 1898. 164 p. (Contributions to American educational history, no. 21.) 243
652. 1898 no. 3. History of education in New Hampshire; by George Gary Bush. Washington, 1898. 170 p. (Contributions to American educational history, no. 22.) 244
653. 1899 no. 1. History of education in New Jersey; by David Murray. Washington, 1899. 344 p. (Contributions to American educational history, no. 23.) 252
654. 1899 no. 2. History of education in Mississippi; by Edward Mayes. Washington, 1899. 290 p. (Contributions to American educational history, no. 24.) 255

655. 1899 no. 3. History of higher education in Kentucky; by Alvin Fayette Lewis. Washington, 1899. 350 p. (Contributions to American educational history, no. 25.) 256
656. 1900 no. 1. History of education in Arkansas; by Josiah H. Shinn. Washington, 1900. 121 p. (Contributions to American educational history, no. 26.) 262
657. 1900 no. 2. Higher education in Kansas; by Frank W. Blackmar. Washington, 1900. 166 p. (Contributions to American educational history, no. 27.) 263
658. 1900 no. 3. The University of the state of New York: history of higher education in the state of New York; by Sidney Sherwood. Washington, 1900. 538 p. (Contributions to American educational history, no. 28.) 264
659. 1900 no. 4. History of education in Vermont; by George Gary Bush. Washington, 1900. 216 p. (Contributions to American educational history, no. 29.) 265
660. 1902 no. 1. History of education in West Virginia; by A. R. Whitehill. Washington, 1902. 165 p. (Contributions to American educational history, no. 30.) 280
661. 1902 no. 2. The history of education in Minnesota; by John N. Greer. Washington, 1902. 223 p. (Contributions to American educational history, no. 31.) 281
662. 1902 no. 3. Education in Nebraska; by Howard W. Caldwell. Washington, 1902. 268 p. (Contributions to American educational history, no. 32.) 282
663. 1902 no. 4. A history of higher education in Pennsylvania; by Charles H. Haskins and William I. Hull. Washington, 1902. 272 p. (Contributions to American educational history, no. 33.) 283
664. 1903 no. 1. History of higher education in Colorado; by James Edward Le Rossignol. Washington, 1903. 67 p. (Contributions to American educational history, no. 34.) 292
665. 1903 no. 2. History of education in Texas; by J. J. Lane. Washington, 1903. 334 p. (Contributions to American educational history, no. 35.) 293
666. 1903 no. 3. History of higher education in Maine; by Edward W. Hall. Washington, 1903. 241 p. (Contributions to American educational history, no. 36.) 294

IV. BULLETIN.

667. 1906 no. 1. The Education bill of 1906 for England and Wales as it past the House of Commons; by Anna Tolman Smith. Washington, 1906. 48 p. 360
- Same. 2d ed. Washington, 1907. 48 p.
668. 1906 no. 2. German views of American education, with particular reference to industrial development, collated from the reports of the Royal Prussian industrial commission of 1904; by William N. Hailmann. Washington, 1906. 55 p. 361

CONTENTS: General considerations.—The kindergarten.—Elementary schools.—Middle schools.—Normal instruction.—Drawing and art instruction.—Industrial art schools.—Technical colleges and other advanced technical institutions.—Apprenticeship and trade schools.—Contents of the "Reiseberichte."

668. 1906 no. 2. 2d ed. German views of American education, with particular reference to industrial development, collated from the reports of the Royal Prussian industrial commission of 1904; by William N. Hailmann. 2d ed. Washington, 1907. 55 p.
669. 1906 no. 3. State school systems: legislation and judicial decisions relating to public education, October 1, 1904, to October 1, 1906; by Edward C. Elliott. Washington, 1906. 156 p. 363

— Same. 2d ed. rev. Washington, 1907. 156 p.

CONTENTS: Legislation relating to public education: A. Administrative control and supervision of elementary and secondary education; B. State finance and support; C. Local finance and support; D. Buildings and sites; E. Teachers in elementary and secondary schools; F. Teachers: employment, etc.; G. Teachers: professional training and education; H. School population and attendance; I. School discipline; J. Health regulations; K. Text-books and supplies; L. Subject-matter of instruction; M. Special types of school; N. Secondary education: High schools and academies; O. Higher educational institutions; P. Professional and higher technical education; Q. Private and endowed higher institutions; R. Libraries; S. Education of defectives and delinquents.

Recent decisions of state supreme courts.

670. 1907 no. 1. The continuation school in the United States; by Arthur J. Jones. Washington, 1907. 157 p. 367

CONTENTS: I. Introduction.—II. Statistical exhibit of school attendance and withdrawal.—III. Agencies for supplementary education in other countries.—IV. Different types of continuation school.—V. Kind and amount of instruction given in continuation schools.—VI. The place and purpose of the continuation school.—VII. Bibliography.

671. 1907 no. 2. Agricultural education including nature study and school gardens; by James Ralph Jewell. Washington, 1907. 140 p. 368

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BIBLIOGRAPHY OF EDUCATION FOR 1907

COMPILED BY

JAMES INGERSOLL WYER, Jr., and MARTHA L. PHELPS

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WASHINGTON
GOVERNMENT PRINTING OFFICE
1908

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LETTER OF TRANSMITTAL

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, June 5, 1908.

SIR: I have the honor to transmit herewith the manuscript of a bibliography of education for the year 1907, compiled by James Ingersoll Wyer, jr., and Martha L. Phelps, of the New York State Library. The wide usefulness of these annual bibliographies has been clearly shown in connection with the publications of Mr. Wyer and his associates since the year 1899. It is found especially desirable to have such a publication issued as a part of the plan now in course of realization, of making the library of this office more directly useful to the libraries of educational institutions and to individual students of education throughout the country. I would respectfully recommend the publication of this bibliography, in the belief that it will have such wide and varied use.

I have the honor to be,

Very respectfully,

ELMER ELLSWORTH BROWN,
Commissioner.

The SECRETARY OF THE INTERIOR.

BIBLIOGRAPHY OF EDUCATION FOR 1907.

INTRODUCTION.

HISTORY.

This bibliography is the ninth similar annual summary of the English literature of education. The first eight numbers, covering the years 1899-1906, appeared in the *Educational Review* for April, 1900; April, 1901; June, 1902, 1903, 1904, 1905; September-October, 1906, and June, 1907. The publication of the present number is assumed by the United States Bureau of Education.

There is also incorporated into the present annual summary, as the initial group of titles, under the caption "Bibliography," the annual list of "Recent Educational Bibliography," which has been printed in each October number of the *School Review* since 1898. Thus the two principal annual guides to the literature of educational topics have been united under new auspices in the present publication.

PLAN.

The bibliography is planned to include:

1. Books on educational subjects printed in the English language in 1907.
2. Important articles on the same topic from the periodicals of 1907.
3. Valuable papers published in the transactions of educational societies that bear the imprint date 1907.
4. All chapters of distinct educational interest from any books bearing date 1907 and all notable matter of the same sort wherever found.

It does not include:

- a. Purely local current literature and reports of separate institutions, provinces, colonies, or states. For all such material the student is referred to reports of state departments and of the thousands of educational institutions in this country, in Great Britain, and in the colonies.
- b. Unimportant matter, such as is being constantly published in journals.

c. Text-books.

d. New editions with slight and unimportant changes.

The distinctive features of the compilation are:

1. The careful examination of all matter included and the selection of only what seems important.
2. The numerous descriptive annotations.
3. The classification by subject-matter so that the worker in any line may find together the literature of interest to him. The decimal classification has, with a few deviations, been followed, both as being on the whole the most satisfactory classification in use, and as being very widely used by libraries.

A detailed outline of the classification precedes the bibliography. The student of school hygiene, for example, finding from this outline that the year's literature on that subject is grouped under section 371.7, has but to turn to the section having that number in each of the previous annual lists to bring under his eyes the titles of the most important books and articles of the past nine years on his specialty. An author index of names and a minute subject index, bringing out many topics not mentioned in the classification, are appended.

Unanimity, or even general agreement, can not be hoped for as to the selection, from the vast range of the annual literature on educational topics, of the articles that are best worth mention in a list like this, a list aiming at selection rather than completeness. Most of the current contributions appear in the proceedings of educational societies, and when the annual volume of papers and addresses of the National Education Association, the most important body of educators in the country, contains so much that, however pertinent and profitable it may have been as originally given, is trivial when considered for the purposes of this bibliography, the task of the bibliographer in examining the annual grist of similar grain is not an easy one. It has, indeed, seemed wisest in case of doubt to include certain titles of apparently indifferent value (with suitable descriptive notes) rather than to risk the omission of articles that might be helpful.

It is not claimed that all the matter listed here has permanent value. Much of it is but current chronicle, yet as such topics are to-morrow matters of educational history, it seems proper to include some of the most important literature relating to them.

LITERATURE OF 1907.

The official and semiofficial literature of the year has been unusually extensive. Two complete annual reports (four volumes) of the United States Commissioner of Education bring the belated series close up to date, and provide statistical summaries covering nearly all phases of American education, while the figures are relatively fresh. The National Education Association, in its interesting fiftieth anni-

versary volume and the usual annual volume of proceedings, covering the Los Angeles meeting, has also given us double measure; the notable papers read before the educational congress at the St. Louis exposition in 1904 at last have been collected and published (No. 61 below), while in value and extent the published papers and discussions of the constantly increasing number of educational associations have not been less than in past years. The important series of special reports from the British education office, begun under the editorship of Doctor Sadler, is increased by several new volumes (Nos. 81, 84, 295 below). An examination of section 375.6 of the bibliography and a comparison with the same section for previous years bring out sharply the marked increase in the attention paid to the subject of industrial education within a single year. Doctor Sadler's encyclopedic volume (No. 264) is easily the most significant contribution to a knowledge of the work done in Europe, while the monograph by Mr. A. J. Jones (No. 255), the formation of a national society for the promotion of this form of education (No. 260), a report of real progress by the new Massachusetts commission (No. 257), the attention paid to the topic on the programme of the Social Education Congress in Boston (No. 266), and an excellent synopsis (No. 261) of its importance and possibilities by Mr. H. S. Person, all testify to a new and very lively interest in the subject in the United States.

The other topic which has received the most unwonted discussion during the year under review is that of teachers' salaries and pensions. The work and reports of the Carnegie Foundation have undoubtedly stimulated some cities and States to consider and adopt pension plans, and the matter of salaries has shown a "sympathetic" interest which has in New York State gone to the point of attempting to secure (see No. 146) "equal pay for equal work" for both sexes through mandatory legislation.

Among the books dealing with educational theory which challenge attention either by extent, timeliness, or content are Bray—*The Town Child* (No. 26); Chancellor—*Motives, Ideals, and Values in Education* (No. 29); Keatinge—*Suggestion in Education* (No. 51); and Urwick—*The Child's Mind* (No. 53).

In methodology Bagley—*Classroom Management* (No. 168) deals not with how best to teach the substance of the various branches, but with the principles and technique of the routine of the schoolroom; De Garmo—*Principles of Secondary Education* (No. 227) carefully analyzes the content and value of the curriculum, subject by subject; while in MacClintock—*Literature in the Elementary School* (No. 308), O'Shea—*Linguistic Development and Education* (No. 237), and Young—*Teaching of Mathematics in the Elementary and*

Secondary School (No. 245) we have interesting or important contributions to the methodology of special branches.

Freeman—Schools of Hellas (No. 91) and Monroe—History of the Pestalozzian Movement in the United States (No. 110) are noteworthy additions to educational history, and in the allied field of biography Compayré's monographs on Herbart, Rousseau, Pestalozzi, Spencer, and Mann have been published in English translations during the year. In other directions should be noticed Miss Burstall's English High Schools for Girls (No. 330); the California prize essays on Moral Training in the Public Schools (No. 350); and the annual volume from the Religious Education Association (No. 351).

Dealing with higher education are the two little volumes of reprinted papers and addresses by C. F. Adams (No. 381) and Prof. A. F. West (No. 396), and above all Birdseye—Individual Training in Our Colleges (No. 384), which, while perhaps somewhat over-drawing conditions and unduly magnifying the remedial possibilities of college fraternities, was characterized by a reviewer in the Dial as "the most important book on education which has appeared in the last ten years."

The compilers are indebted to Prof. M. E. Sadler for help in selecting the British titles, and he in turn has associated with himself Prof. John Adams, Prof. J. J. Findlay, Mrs. McKenzie, Harrold Johnson, Prof. A. Darroch, Prof. E. P. Culverwell, and Mr. A. E. Twentyman, to whom acknowledgments are also made.

OUTLINE OF CLASSIFICATION.

Bibliography.

370. EDUCATION—THEORY, PHILOSOPHY.

- 370.1 Psychology and education.
- 370.5 Periodicals.
- 370.6 Associations.
- 370.7 The study of education.
- 370.9 General histories of education: historical material for different countries arranged alphabetically by countries.
- 370.92 Biography.

371. TEACHERS, METHODS, DISCIPLINE,

- 371.1 Teachers.
 - 371.12 Training of teachers.
 - 371.16 Salaries for teachers.
 - 371.17 Pensions for teachers.
- 371.2 School organization and administration; the superintendent.
 - 371.23 Vacation schools.
 - 371.25 Classification of pupils.
 - 371.28 Promotion of pupils.
- 371.3 Methods of instruction. (For methods in special branches see 375 and its subdivisions.)
 - 371.42 Manual training.
- 371.5 Government, discipline, punishment.
 - 371.52 Attendance, truancy.
 - 371.55 Corporal punishment.

Bibliography—Continued.

371. TEACHERS, METHODS, DISCIPLINE—Continued.

371.6 School buildings and furniture.

371.64 School libraries; libraries and schools.

371.7 School hygiene.

371.73 Physical education, gymnastics, athletics.

371.8 Student life, customs, and societies.

371.9 Education of special classes (defectives, dependents, delinquents).

371.94 Negro.

371.95 Indian.

372. ELEMENTARY EDUCATION.

372.2 Kindergarten.

373. SECONDARY EDUCATION OTHER THAN PUBLIC, arranged alphabetically by countries.

375. CURRICULUM.

375.04 Elective studies.

375.2-375.9 Special subjects of instruction, divided according to decimal classification.

376. EDUCATION OF WOMEN.

376.7 Coeducation.

377. RELIGIOUS AND MORAL EDUCATION.

378. HIGHER EDUCATION; COLLEGES AND UNIVERSITIES; for special countries, arranged alphabetically by countries.

378.01 College entrance requirements.

378.2 Academic degrees.

378.3 Graduate work; research.

379. PUBLIC SECONDARY EDUCATION.

379.11 School finance, taxation.

379.14 School laws.

379.15 School supervision.

379.23 Compulsory education.

379.5 Secondary education in different countries, arranged alphabetically.

A minute subject index of topics not brought out in the above outline is found incorporated with the author index at the end of the bibliography.

The abbreviations used are ordinary ones and easily comprehended. Volume and page are separated by the colon. Thus 6:386-407 means vol. 6, pages 386 to 407. N. E. A. Proc. is, of course, National Education Association, Journal of Proceedings. The reports of the United States Commissioner of Education, Dr. E. E. Brown, are entered as a whole and each important article appears also under its appropriate subject. An excellent summary of contents in the introduction makes the use of the volumes easier and more profitable. No date beyond the month is given in the references, as 1907 is always understood.

BIBLIOGRAPHY OF EDUCATION, 1907.

BIBLIOGRAPHY.

1. *Agricultural education.* Jewell, J. R. Agricultural education including nature study and school gardens. (U. S.—Education Bureau. Bulletin 2, 1907, p. 128-32.)

One hundred and twenty-three titles classified under the headings, Nature study and school gardens; Elementary instruction; Secondary instruction; Collegiate instruction.

2. *Attendance.* References to publications relating to school attendance and the welfare of children. (U. S.—Education, Comm'r of. Report for 1906. 2:1288-90.)

Sections on Compulsory education; truancy; school hygiene; juvenile courts.

3. *Auxiliary schools.* Maennel, B. Führer durch die Literatur des Hilfsschulwesens (in *Kinderfehler*, Oct., 1906, and following numbers).

A comprehensive and systematically classified bibliography. A selection is appended to No. 3 of the Bulletin for 1907 of the U. S. Bureau of Education.

4. *Canada—Education.* Coleman, H. T. J. Public education in upper Canada. p. 118-20.

5. *Child study.* Smith, T. L. Bibliography of articles relating to the study of childhood and adolescence which have been published in the *Pedagogical seminary* and *American journal of psychology*. (Ped. sem. Sept., 14: 355-65.)

Two hundred and three items listed by author with minute subject index.

6. ——— Washburne, Mrs. M. F. Study of child life. 1907. p. 170-74.
7. ——— Wilson, L. N. Bibliography of child study for the year 1906. (Ped. sem. 14: 320-354.)

This 10th similar annual summary shows 362 titles, most of them on some near or remote phase of the subject. It is followed by a list of 203 articles on child study which have appeared within 15 years in the *Pedagogical Seminary*.

8. *Colleges and universities.* Snow, L. F. The college curriculum in the United States. p. 184-86.
9. *Continuation schools.* Jones, A. J. The continuation school in the United States. (U. S.—Education Bureau, Bulletin 1, 1907.)

A considerable bibliography is appended.

10. ——— Sadler, M. E. ed. Continuation schools in England and elsewhere. See No. 264 for full entry. List of books and papers relating to the continuation school in France is found on p. 641-42; in Germany, p. 534; in the U. S., p. 655 and 673; in Denmark, p. 512; in Great Britain, p. 750-54.

11. *Denison university*. Hines, Mrs. K. S. Denison bibliography. (Denison memorial volume. 1907. p. 151-61.)
12. *Education*. Loos, Joseph. Enzyklopädisches Handbuch der Erziehungskunde. 2 v. 1906-8. Leipzig.
A wealth of bibliographical references, almost wholly to German books, appears at the end of each important article.
13. ——— Tyler, J. M. Growth and education. p. 271-91.
Five hundred and twenty-five titles grouped according to the titles of chapters forming the book. The references on some of the minor topics should be especially useful.
14. ——— Wyer, J. I. Recent educational bibliography. (School rev. Oct., 15: 608-14.)
In this tenth similar annual list, 37 items are noted and reviewed.
15. ——— Wyer, J. I., and Brown, M. G. Bibliography of education for 1908. (Educ. rev. June, 34: 47-93.)
Eighth similar annotated list of educational literature in English. Discontinued in the Educational Review and the list covering the year 1907 taken over by the Bureau of Education.
16. *Education—History*. Anderson, L. F. A study of mediæval schools and school work. (Ped. sem. 14: 223-82.)
Seventy-four titles, German, Latin, French, and English, including many unusual books of rather collateral but very vital relation to the subject.
17. *Industrial education*. Richards, C. R. Selected bibliography on industrial education. 32 p. O. (Nat. soc. for the promotion of industrial education, Bulletin 2.)
Twenty-seven books and 88 briefer articles, all in English, are listed. The descriptive and critical notes are full. Nearly all material has appeared since 1892, relates mainly to the United States, and excludes matter on manual training and higher technical education. A subject index is prefixed.
18. *Manual training*. Pierce, Louisa. Bibliography of the manual arts, September, 1905 to September, 1907. (In Council of supervisors of the manual arts. Yearbooks 1906, p. 203-35; 1907, p. 139-59. Sec'y of the Council, E. D. Griswold, Yonkers, N. Y.)
This list is an annual feature. It is an annotated author list with a subject index and is of importance to any who follow the literature of the subject.
19. *Mathematics*. Young, J. W. A. The teaching of mathematics in the elementary and the secondary school. 351 p. D. Longmans, \$1.50.
The bibliographies at the heads of the chapters form an extensive and useful collection of titles on the various phases of the pedagogy of mathematics.
20. *Play*. Johnson, G. E. Education by plays and games. p. 223-28.
Ninety English titles, classified under the following headings: Periods of growth; Meaning of play; Play in education; Play and games.
21. *Reform schools*. Snedden, D. S. Administration and educational work of American juvenile reform schools.
Brief bibliographies appear at the ends of chapters.
22. *West Virginia university*. Leonard, P. W. Bibliography of West Virginia university, its faculty and graduates, 1867-1907. 62 p. O. The Univ., Morgantown, W. Va.

370. EDUCATION—THEORY, PHILOSOPHY.

23. Allen, A. W. Home, school and vacation. 220 p. D. Houghton, \$1.25.
Counsel and suggestion to parents by a mother who believes that sincere, educated, and conscientious fathers and mothers who can provide good homes should do much more of the education of their children in these homes than is contemplated in the prevalent conception of the function of the public school.
24. Baker, J. H. American problems; essays and addresses. 222 p. Longman's, \$1.20.
Part 3 comprises 6 brief articles on educational topics: The teacher taught.—Evolution and education (a review of Hall: Adolescence).—The culture element and economy of time in education.—Electives in secondary schools.—The American university.—A national university. The pieces are thoughtful comments on current problems by a practical educator.
25. The basis of an effective education—culture or vocation. (School rev. May, 15: 333-74.)
Symposium by R. A. Woods, A. E. Kennelly, and A. W. Roberts at meeting of Harvard Teachers' Association.
26. Bray, Reginald. The town child. 333 p. D. Fisher Unwin, 7s. 6d.
Advocates State intervention and regulation throughout the whole of the upbringing of a child. The first part of the books contrasts city and country environments as to their psychological effects upon the child body and mind.
The second part describes the nature, object, and method of the ideal education which should develop the child; not only treating its general phases but discussing many specific topics, such as "feeding school children," the "religious question," the "feeding of mothers," etc.
27. Brown, E. E. Are we an inventive people in the field of education? (Science, 9 Aug., n. s. 26: 161-70.)
Address delivered before Phi Beta Kappa at Vassar College, June, 1907.
A short list is given of what may be called distinctively American contributions to education, but to support the author's statement that "our educational invention still lags far behind our invention in the domain of mechanism" a longer list appears of "points where our educational invention has thus far failed to do its work." The three following "problems now calling for constructive leadership" are discussed at some length: (1) Combination of the methods of the literary school with the methods of apprenticeship; (2) differentiation of woman's education; (3) international organization of education.
28. Burbank, Luther. The training of the human plant. 90 p. S. Century, 60c.
CONTENTS.—The mingling of races.—The teachings of nature.—Differentiation in training.—Sunshine, good air, and nourishing food.—Dangers.—Marriage of the physically unfit.—Heredity—predestination—training.—Growth.—Environment the architect of heredity.—Character.—Fundamental principles.
Thoughts and speculations as to the application of principles of plant culture to the education of children. Also in Century, May 1906.
29. Chancellor, W. E. A theory of motives, ideals, and values in education. 543 p. O. Houghton, \$1.75.
A discussion of education as an integral part of civilization. Shows wide reading and is furnished with bibliographies and a good index. Is reviewed at length in the Dial for May 1, 1908.
30. Cole, P. R. Herbart and Froebel: An attempt at synthesis. 116 p. O. Columbia Univ. \$1. (Teachers coll. cont. to educ. no. 14.)
A review of the educational theories of Herbart and Froebel in the light of the philosophies which they imply. A comparison and interpretation of the theories of both which concern reality, consciousness, and character. An attempt to adjust certain differences of emphasis in their respective theories.

31. **Coursault, J. H.** The learning process; or educational theory implied in theory of knowledge. 99 p. O. Columbia Univ. \$1. (Teachers coll. cont. to educ. no. 16.)

Another attempt to get hold of and delimit the fundamental theory of education by detaching it from the great body of speculative philosophy. The theories of a dozen or more philosophic systems are considered, their educational implications indicated, and the resultant theory summarized.

32. **Cox, C. F.** What education is of most worth? (Bibliotheca sacra, Oct. 64: 638-60.)

33. **Darroch, Alexander.** (The) children; some educational problems. 133 p. O. Jack, 1s.

"This little book seeks to emphasize that the aim of all education is to secure the social efficiency of the future members of the state, and that this involves an endeavor to secure the physical, economic, and ethical efficiency of the children of the nation."

34. **Draper, A. S.** Addresses and papers. 132 p. O. N. Y. State Education dep't. Gratis.

CONTENTS.—Appointing officers and civil service regulations.—The nation's responsibilities concerning dependent peoples.—What next about Union University?—The schools and international peace.—The American type of university.—New York's obligations to her history.—Illiteracy in the United States.—A Federal educational plan needed.—National systems of education.—What the women's clubs may do for the schools.

35. **Hadley, A. T.** Economy in education. (N. Y. Associated academic principals. Proc. twenty-second ann. conference, p. 10-21.)

36. **Harnack, Adolf, and Herrmann, Wilhelm.** The moral and social significance of modern education. (In their Essays on the social gospel. Putnam, \$1.25. p. 92-141.)

An address by Dr. Harnack in 1902 before the Evangelical Social Congress in Dortmund.

37. **Harper, J. W.** Education and social life. 315 p. D. Pitman, 4s. 6d.

This book emphasizes the effect which judiciously organized and administered education may have on social progress, and indicates that this most important educational result is sometimes minimized by too much attention to utilitarianism.

38. **Harris, W. T.** Social culture in the form of education and religion. (Congress of arts and sciences. Houghton. v. 8, p. 1-16.)

"The perennial continuance of the world-view of Christianity through the special form of social culture which belongs to the church is a necessary condition presupposed by the forms of social culture intrusted to the school."

39. **Hayward, F. H.** (The) meaning of education as interpreted by Herbart. 217 p. D. Ralph, Holland & Co., 2s.

40. **Jolly, William.** Ruskin on education; some needed but neglected elements. 167 p. S. Geo. Allen, 1s.

"A hortatory preachment, not a philosophical essay; a fervent and persuasive exposition."—London Journal of Education.

41. **Lockyer, Norman.** Education and national progress: essays and addresses, 1870-1905. 282 p. O. Macmillan, 5s.

The chapters have nearly all been previously printed in different places. Collected, they form a contribution to British educational history and policy for the period covered.

42. **Magnus, Philip.** The application of scientific method to education. (Nature, 22 Aug., 76: 434-9.)

Also in *Science*, n. s. 26: 574-86.

Opening address before the educational science section of the British Association, August 1, 1907. An argument to show that while education itself may not yet fulfill all the conditions which would justify its claim to be classed as a science, the scientific method of investigation is most effective in dealing with educational problems. Illustrates from the reform of English elementary education.

43. **Matthews, F. H.** The principles of intellectual education. 138 p. D. Cambridge Univ. press, 2s. 6d.

A dozen chapters on the theory and aims (exactness and flexibility) of education and the order in which each curriculum subject should be studied to get the greatest educational value. The point of view is distinctly Herbartian, and the tests constantly applied are interest and adaptability to correlation. The earliest formal education should be through the senses and largely by means of manual activities. Greek should be studied before Latin and modern languages before either.

44. **Owen, W: B.** Social education through the school. (School rev. Jan., 15: 11-26.)

Paper read at nineteenth educational conference of the academies and high schools in relations with the University of Chicago.

The school being a social institution in that it is itself a society, Dean Owen proposes to enlarge the functions of the school to include the general social training of the child so far as his life in the school affords opportunity, and considers the general features of a practical way of going about the work.

45. **Parker, S. C.** Finding the individual. (Jour. of ped. June, 19: 193-213.)

Are individual differences in human beings fundamental? Of what social importance are they? How may they be discovered and differentiated in formal education?

46. **Reich, Emil.** The constants of success—education. (In his *Success in life*. Duffield, \$1.50. p. 50-123.)

Comments on the value of education in active life.

47. **Rooper, T. G.** Selected writings; edited with a memoir by R. G. Tatton. 293 p. O. Blackie, 7s. 6d.

These 19 papers have all been printed before, most of them in the author's volumes, *School and Home Life*, and *Educational Studies and Addresses*.

48. **Storms, A. B.** Democracy and education. (In *N. E. A. Proc.*, p. 62-70.)

The function and opportunities of education in a republic. Advantages and dangers from the commercial aspects of education and research.

49. **Tyler, J. M.** Growth and education. 294 p. D. Houghton, \$1.50.

A scientific study of the growth of the child, which argues for physical and moral as well as intellectual efficiency in education. To guide teacher and parent, the important facts of biology, evolution, and physiology are presented, which bear on the development of the child. There is a chapter on manual training.

370.1. PSYCHOLOGY AND EDUCATION.

See also No. 237.

50. **Bennett, C. J. C.** Formal discipline. 76 p. O. Teachers college, 50c.

Some of the psychological bearings and effects of that part of the educational process which makes for mental discipline.

51. **Keatinge, M. W.** Suggestion in education. 202 p. O. A. & C. Black, 4s. 6d.

A consideration of the practical results obtainable in teaching from the deliberate, extended, and studied use of the same psychological quality of "suggestion" that is employed in hypnotism.

52. **Schwarz, Hermann.** The study of experimental pedagogy in Germany. (School rev. Jan., 15: 1-10; Sept., 15: 535-43; Nov., 15: 631-42.)

What psychology shows to be the most fruitful hours for class instruction and for study. Studies in fatigue as affecting the assignment of time in the school day. Value and effect of home study.

53. **Urwick, W. E.** The child's mind; its growth and training, being a short study of some processes of learning and teaching. 269 p. D. Longmans, \$1.50.

An attempt to set forth in simple and, so far as possible, untechnical language some results already obtained from a study of mind growth as an organic process, and to establish a clear and definite connection between those processes of learning which the mind possesses and the methods by which it should be taught and trained. The author's object is to found the teaching and training of children on the results of psychology and biology so far as these sciences have explained the development of children's minds.

370.5. PERIODICALS.

Only new journals are included in this section. The current British journals are listed and characterized in each volume of the Schoolmaster's Yearbook.

See also No. 212.

54. **Bardeen, C. W.** Educational journalism. (N. E. A. 50th anniv. vol. p. 506-514.)

Brief notes supplementing earlier and fuller data in N. E. A. Proceedings, 1893, and School Bulletin, volumes 19-20. The journals are named with editors and dates published. Estimates are seldom attempted.

55. **Social education quarterly** and proceedings of the Social education congress; edited by C. A. Scott. 6 Kirkland road, Cambridge station, Boston, \$2 per year.

Number one appeared in March, 1907, and the three numbers for that year are filled with the papers read at the Social Education Congress, November 30, 1906.

370.6. ASSOCIATIONS AND SOCIETIES.

The volumes of proceedings of certain American educational associations are noted in this section. A list of British societies with officers and brief sketch of each is found in the Schoolmaster's Yearbook for each year.

56. **Association of American universities.** Journal of proceedings and addresses of the eighth annual conference held in Cambridge, Mass. Nov. 23-24, 1906. 111 p. O. Assoc. No price.
57. **Association of colleges and preparatory schools of the middle states and Maryland.** Proceedings of the twentieth annual convention held at Philadelphia, Nov. 30-Dec. 1, 1906. 144 p. O. A. H. Quinn, Secy., Univ. of Pa. Philadelphia. No price.
58. **Association of colleges and preparatory schools of the southern states.** Proceedings of the thirteenth annual meeting, Birmingham, Ala. Nov. 7-8, 1907. 89 p. O. J. H. Kirkland, Sec. Vanderbilt Univ. Nashville, Tenn.
59. **Catholic educational association.** Report of the proceedings and addresses of the fourth annual meeting, Milwaukee, Wis., July 8-11, 1907. 396 p. O. Rev. F. W. Howard, Sec. 1651 E. Main St., Columbus, O. No price.

60. **Conference for education in the south.** Proceedings of the tenth annual conference, Pinehurst, N. C. April 9-11, 1907. 300 p. O. S. C. Mitchell, Richmond college, Richmond, Va. No price.

61. **Congress of arts and sciences, universal exposition, St. Louis, 1904;** edited by Howard J. Rogers. Volume 8, Education and religion. 493 p. O. Houghton, \$2.50.

The most important papers which were not separately published in 1904-5 have been entered in this bibliography under their proper subjects.

62. **Educational associations.** (N. E. A. 50th anniv. vol. p. 453-506.)

Brief accounts of the origin, growth, and work of 14 American associations. The information presented has never before been collected, and it is well to have these contributions.

63. **Michigan schoolmasters' club.** Proceedings at the forty-second meeting held in Ann Arbor, Mar. 27-30, 1907. 150 p. Q. Ann Arbor, 50c.

64. **Monroe, W. S.** Recent international congress at Liège. (N. E. A. 50th anniv. vol. p. 351-355.)

66. **National education association.** Journal of proceedings and addresses at the forty-fifth annual meeting held at Los Angeles, Cal., July 8-12, 1907. 1102 p. O. Irwin Shepard, Winona, Minn., \$2.

Certain of the papers are separately noted under the proper headings in other parts of this bibliography. An account of the important business done at the Los Angeles meeting is found in the October-December number of the Forum, p. 228-33.

67. **National educational association.** Fiftieth anniversary volume 1857-1906. 949 p. O. Irwin Shepard, Winona, Minn., \$2.

Includes Proceedings and papers of the department of superintendence at Louisville, February, 1906; a notable report on instruction in library administration in normal schools; 13 important papers specially prepared for this volume by members in America and other lands; a chapter sketching the history of various educational associations, and a wealth of statistical and bibliographical matter relating to the N. E. A. itself. Many of the articles in this volume are indexed separately under proper subject in this bibliography.

68. **National society for the scientific study of education.** Sixth year book. 2 pts; O. Univ. of Chic. press, \$1.28.

Pt. 1.—Vocational studies for college entrance. Pt. 2.—The kindergarten.

69. **National union of teachers.** Thirty-seventh annual report, 1907 and list of members for 1906. 432 p. O. N. U. T. 1s.

A handbook giving statistics and regulations about the N. U. T., list of associations in the union, names and addresses of members, and much general information relating to English teachers.

70. **N. Y. (state)—Associated academic principals.** Proceedings of the twenty-second annual conference . . . 1906. 98 p. O. Albany, Educ. dept. No price. (Secondary education bulletin 36.)

71. **N. Y. (state)—Education department.** Forty-fourth university convocation. 116 p. O. Alb. No price. (Department Bulletin 4.)

Certain of the papers are entered separately in this bibliography.

72. **New York state association of school commissioners and superintendents.** Proceedings of the 51st annual meeting at Cornell university, Ithaca, Oct. 3-5, 1906. 104 p. O. N. Y. State Education dep't. Gratis.

Concerned with the rural schools of New York State.

370.7. THE STUDY OF EDUCATION.

See also material on normal schools in section 371.12.

73. **Rein, Wilhelm.** The place and office of pedagogy in the university. (Congress of arts and sciences. Houghton. v. 8, p. 50-63.)

Examines the nature and contents of the formal science and art of pedagogy, and discusses its relations with other subjects and the function and purpose of teaching it.

370.9. HISTORY OF EDUCATION.

History of higher education and of individual colleges and universities is under section 378 and its geographical subdivisions. For matter on systems of secondary education, which is current chronicle to-day but will be history to-morrow, see section 370.5.

General.

74. **Anderson, L. F.** A study of mediæval schools and school work. (Ped. sem. June, 14: 223-82.)

Author has brought together and grouped under numerous captions relating to history, curriculum, and methods of work many bits of educational information dug from books not commonly quoted in such a connection. Bibliography, p. 280-282.

75. ——— Study of the prototypes of the modern non-professional school among the Greeks and Romans. (Ped. sem. Mar., 14: 1-38.)

Description of early Greek and Roman education, giving the character and methods of instruction. Bibliography, p. 37-38.

76. **McEvoy, T. J.** Epitome of history and principles of education. 267 p. D. Author, 306 Fulton st., Brooklyn. No price.

Not a connected narrative or history, but 47 syllabi arranged in approximate chronologic order; apparently designed to help teachers or normal students prepare for examination.

77. **Turner, William.** Irish teachers in the Carolingian revival of learning. (Catholic univ. bulletin, July, 13: 382-99; Oct. 562-81.)

An account of the literary activity of the Irish scholars of the ninth and tenth centuries, based upon manuscripts found in the libraries of Germany, France, and Italy.

78. **Walsh, J. J.** The thirteenth—greatest of centuries. 436 p. O. Catholic summer school press, \$2.50.

Lectures delivered at the school. Chapters 2-7 and 9 discuss mediæval universities and their work, the arts and crafts, technical schools, popular education, books, and libraries.

Alaska.

79. **Jackson, Sheldon.** Report on education in Alaska. (U. S.—Education, Comm'r of. Reports for 1905. 1: 267-91; 1906, 1: 237-55.)

The usual annual statistical reviews, with chapter on the Government reindeer herd.

Canada.

80. **Coleman, H. T. J.** Public education in Upper Canada. 120 p. O. Columbia Univ. \$1. (Teachers coll. cont. to educ. no. 15.)

A selective, descriptive, and interpretative study of public education only in what is now the Province of Ontario, from 1791 to 1841, with a brief added chapter enumerating tendencies since the latter date. It covers much the same period; is not so broad in scope as Doctor Ross's school system of Ontario, but goes more thoroughly into cause, effect, and significance of events.

Europe.

81. **Great Britain—Education, Board of.** Schools public and private in the north of Europe. 136 p. O. (Special reports on educational subjects. v. 17.)

Prepared by J. S. Thornton, as result of fourteen years' acquaintance with and study of the schools of Norway, Sweden, Finland, and Denmark. As Gilchrist traveling scholar in 1900 and again in 1903 the author visited Scandinavia and studied the school systems at first hand with this monograph in mind. It discusses secondary education only, and dwells upon the hearty cooperation between public and private schools, the uniform examinations system common to both, and the training of secondary school teachers under masters of selected secondary schools.

France.

82. **Education in France.** (U. S.—Education, Comm'r of. Reports for 1906. 1: 57-86; 1906, 1: 19-34.)

The usual annual surveys of current educational movements, with so much of retrospect as clearness demands. Covers primary, secondary, and higher education and gives many statistics.

83. **Friedel, V. H.** Problems of secondary education in France. (School rev. Mar., 15: 160-83.)

Author is an official in the French education department. An account of the main features of the reforms in the reorganization of secondary education in 1902.

84. **Great Britain—Education, Board of.** The education and training of the French primary school teacher. 222 p. Q. (Special reports on educational subjects. v. 18.)

More fully described under No. 141.

85. **Levasseur, P. E.** On the developments and changes in primary teaching in France during the Third Republic (1870-1906). (N. E. A. 50th anniv. vol. p. 408-417.)

Germany.

86. **Paulsen, Friedrich.** The past and the future of German education. (N. E. A. 50th anniv. vol. p. 430-445.)

A translation of Book 4, Chapter 3, of *Das deutsche Bildungswesen*.

Great Britain.

87. **Dunraven, Windham, Thomas Wyndham Quin, Earl of.** Educational chaos. (In his *The outlook in Ireland*. Dutton, \$3. p. 111-37.)

An account of present conditions, prejudices, and denominational feeling about Irish education, with some positive suggestions for betterment.

88. **Education in Great Britain and Ireland, 1904-6.** (U. S.—Education, Comm'r of. Report for 1906. 1: 1-17.)

89. **Godfrey, Elizabeth, pseud.** English children in the olden time. 336 p. O. Methuen, 7s. 6d.

The chapters on Nurture in king's courts; Concerning pedagogues; Educational theories; The genteel academy and the dame school, and The superior parent offer much information about the English education of the fifteenth to the eighteenth centuries.

90. **Strong, John.** The development of secondary education in Scotland. (School rev. Oct., 15: 594-607; Nov., 15: 671-83; Dec., 15: 718-30.)

Traces its development from 1100 to the present. Gives a diagrammatic scheme of present Scottish education.

Greece.

See also No. 201.

91. **Freeman, K. J.** *Schools of Hellas; an essay on the practice and theory of ancient Greek education from 600 to 300 B. C.* 299 p. O. Macmillan, \$1.90.

A young Englishman, scholar of Trinity College, Cambridge, senior chancellor's medalist, and who died at the age of 24, prepared this volume with a view to his candidature for a fellowship of Trinity. Competent critics assert that it has a substantive value as presenting results of first-hand research, and that it brings together conveniently and accurately the materials for studying the subject.

India.

92. **Public education in British India.** (U. S.—Education, Comm'r of. Report for 1906. 1:123-40.)

Reviewing the years 1902-5.

Italy.

93. **Monroe, W. S.** *Progress of education in Italy.* (U. S.—Education, Comm'r of. Report for 1906. 1:73-90.)

Japan.

94. **Kikerchi, D.** *Japanese education.* (Nineteenth cent. June, 61:1012-23.)

An explanation of the circumstances which led to the issue of the Imperial rescript on education in 1890.

Liberia.

95. **Ellis, G. W.** *Education in Liberia.* (U. S.—Education, Comm'r of. Report for 1905. 1:111-29.)

The author is United States secretary of legation at Monrovia.

Philippines.

96. **Educational problems in the dependencies.** (Annals Amer. acad. July, 30:65-89.)

An educational policy for Spanish-American civilization—M. G. Brumbaugh. Education and social progress in the Philippines—D. P. Barrows. Position and work of the Roman Catholic Church in the Philippines—T. B. Lawler.

Porto Rico.

97. **Lindsay, S. M.** *Inauguration of the American school system in Porto Rico.* (U. S.—Education, Comm'r of. Report for 1905. 1:293-344.)

A résumé of social and educational conditions in Porto Rico before American occupation, a brief sketch of the rather discouraging attempts of the military authorities to organize a new system, and a more extended account of the work done under the civil government since 1900. Doctor Lindsay, from his personal experience, reviews the work of Porto Rican and American teachers, the provision for native students in the United States, and the history of educational legislation for the island, and ventures some comments on the future.

Rome.

See also No. 201.

98. **Teetgen, A. B.** *Education in the fifth century.* (In her *Life and times of the Empress Pulcheria.* Sonnenschein, 10s. 6d., p. 37-47.)

Describes the education of a patrician girl in Rome.

Russia.

99. **Simkhovitch, V. G.** History of the school in Russia. (Educ. rev. May, 33: 480-522.)

Shows that while some attention has been paid from the end of the 17th century to professional, higher, and secondary education, elementary education is still sadly neglected.

Servia.

100. **Low, D. H.** Education in Servia. (Jour. of educ. (Lond.) Nov., n. s., 28: 736-39.)

Outlines the organization of elementary, secondary, and special schools.

South America.

101. **Baxter, Sylvester.** School and college in Brazil and Argentina. (Outlook, 10 Aug., 86: 780-7.)

Turkey.

102. **Monroe, W. S.** Education in Turkey. (In his Turkey and the Turks. Page, \$3. p. 161-81.)

Sketches the present facilities furnished by the Turkish Government and by schools founded and maintained by foreigners or by missionaries. The censorship of books and newspapers is described.

United States.

See also section 378, subhead United States, section 379.15, and section 379.5, subhead United States.

103. **Brown, E. E.** Fifty years of American education. (N. E. A. 50th anniv. vol. p. 327-341.)

A topical review of history, movements, tendencies, and accomplishments.

104. **Burns, J. A.** Catholic colonial schools in the French possessions. (Catholic univ. bulletin, Apr., 13: 175-90.)

Includes a description of the first parochial school for girls in the United States, founded at New Orleans 1727 by the Ursuline sisters.

105. ——— Early Jesuit schools in Maryland. (Catholic univ. bulletin, July, 13: 361-81.)

States that the arrival of the Jesuits in Maryland marks the beginning of Catholic educational work in the English colonies.

106. ——— Early mission schools of the Franciscans. (Catholic univ. bulletin, Jan., 13: 25-43.)

An account of the earliest schools in the United States, which preceded by four years the oldest schools in the thirteen original colonies. Includes schools in New Mexico, Texas, Florida, and California.

107. **Gillman, D. C.** Five great gifts to education. (Outlook, July, 86: 648-57.)

Includes brief description of gifts made by George Peabody, John F. Slater, John D. Rockefeller, Andrew Carnegie, and Mrs. Russell Sage.

108. **Johnson, Clifton.** The country school. 158 p. O. Crowell, \$1.50.

This book is an almost verbatim reprint (with one very short added chapter on schoolhouse entertainments) of the author's Country School in New England, published by Appleton in 1893.

109. **Meriwether, Colyer.** Our colonial curriculum, 1607-1776. 301 p. O. Capital pub. co., \$2.

"Devoted to the study of what was actually taught then and how it was actually done. All of the subjects, in all grades of institutions, are taken up in order and treated so as to show as nearly as possible what was the aim, what was the method, and what was the result of teaching then."

110. **Monroe, W. S.** History of the Pestalozzian movement in the United States. 244 p. O. Bardeen, \$2.

"The purpose of the present work is to place on record the labors of a score of men who caught something of Pestalozzi's insight and enthusiasm and who sought to bring about the adaptation of his reforms to conditions in the new world." *Preface.*

The most important chapters are those on the work of William McClure and Joseph Neef. A useful and extensive bibliography is appended.

111. **U. S.—Education, Bureau of.** Reports of the commissioner of education for the years ending June 30, 1905, and June 30, 1906. 4 v. O. Government printing office.

These volumes are smaller than usual and more largely statistical. It is gratifying to note that the statistics are more nearly up to date, and that it is still possible to devote half of volume 1 of each year to the reviews of educational progress in other lands and to the selected articles on current topics which have so long made this report of special interest and value.

112. **Young, E. F.** The educational progress of two years, 1905-07. (In N. E. A. Proc. 383-405.)

Deals with American conditions and events only. A more informal chronicle of current educational happenings is furnished by O. H. Lang to each number of the Forum.

Iowa.

113. **Abernethy, Alonzo.** History of Iowa Baptist Schools. 340 p. D. Woolverton pub. co., Osage, Ia. \$1.25.

The author writes at first hand from a life of over 50 years in Iowa and personal acquaintance with the schools and workers described.

114. **Buffum, H. S.** Federal and state aid to education in Iowa. (Iowa Journal of history and politics. Oct. 1906, 4: 554-98; Jan.-July, 1907, 5: 3-45, 147-92, 311-25.)

Michigan.

115. **The beginnings of the educational system. Educational progress.** (Utley, H. M., and Cutcheon, B. M., eds. Michigan as a province, territory and state. \$20 for 4 v. vol. 3, chap. 15 and vol. 4, chap. 20.)

Pennsylvania.

116. **Burns, J. A.** Catholic colonial schools in Pennsylvania. (Catholic univ. bulletin, Oct., 13: 582-600.)

A description of some of the most prominent schools and teachers from the time of their establishment by Jesuit missionaries from Maryland.

Texas.

117. **Hartmann, C. G.** A study in school supervision with special reference to rural school conditions in Texas. 180 p. Q. (Bulletin of the Univ. of Texas, no. 90.)

370.92. BIOGRAPHY.

Who's Who in America is a current directory of living educators; Who's Who and the Schoolmaster's Year Book for English educators. The N. E. A. list of members who have died during each year is printed in each annual volume of *Proceedings*.

118. **Mellen, G. F.** New England college presidents in the south. (New Eng. mag. June, 36: 468-80.)

Brief sketches of prominent New Englanders who administered colleges of the old South.

119. *Brooks, Charles. Albee, John.* Charles Brooks and his work for normal schools. 31 p. O. Author (Swampscott, Mass.), gratis.
Reprinted from the *Historical Register*, vol. 10, no. 1, Jan., 1907, published by the Medford Historical Society.
120. *Davidson, Thomas. Knight, William.* Memorials of Thomas Davidson the wandering scholar, collected and edited by William Knight. 241 p. O. Glinn, \$1.25.
Twenty-one chapters; recollections, sketches, estimates of Davidson by friends; selections from his letters, lectures, and writings.
121. *Guarino de Verona. McCormick, P. J.* Two Catholic medieval educators. II. Guarino de Verona. (In *Catholic univ. bulletin*, April, 13: 232-49.)
122. *Herbart, Johann Friedrich. Compayré, Gabriel.* Herbart and education by instruction. 142 p. D. Crowell, 90c.
Translation of a volume in series *Les grands éducateurs*, published in Paris in 1904. Save for a brief biographic chapter and one on the spread and influence of Herbart's work, the book is a critical synopsis of his systems of psychology, education, and morals.
123. *Krüsi, Hermann. Krüsi, Hermann.* Recollections of my life. An autobiographical sketch supplemented by extracts from his personal records and a review of his literary productions together with selected essays, arranged and ed. by Elizabeth Sheldon Alling. 439 p. O. The Grafton press, \$2.50.
One thousand copies printed.
124. *Magill, Edward Hicks. Magill, E. H.* Sixty-five years in the life of a teacher 1841-1906. 323 p. D. Houghton, \$1.50.
Record of a long, varied, and interesting career of an ex-president of Swarthmore College and long-a prime mover for advancement of higher education in Pennsylvania. Contains an account of the early history of the elective system.
125. *Mann, Horace. Compayré, Gabriel.* Horace Mann and the public school in the United States. 134 p. D. Crowell, 90c.
A brief biography which may rank with Hinsdale's *Horace Mann and the Common School Revival in the United States*.
126. *Pestalozzi, Johann Heinrich. Compayré, Gabriel.* Pestalozzi and elementary education. 139 p. D. Crowell, 90c.
First published in French in 1902, now first translated. Characterized by sympathetic treatment.
127. *Rooper, Thomas Godolphin. Tatton, R. G.* Memoir of T. G. Rooper. (In *Rooper, Selected writings*. Blackie, 7s. 6d. pref. p. 15-94.)
128. *Rousseau, Jean Jacques. Compayré, Gabriel.* Jean Jacques Rousseau and education from nature. 120 p. D. Crowell, 90c.
Translation of a French monograph first published in 1901. A synoptic and critical sketch.
129. *Spencer, Herbert. Compayré, Gabriel.* Herbert Spencer and scientific education. 119 p. D. Crowell, 90c.
First published in France in 1901, and in translation forms a most considerable critique of Mr. Spencer as an educator only.

371. TEACHERS, METHODS, DISCIPLINE.

371.1. TEACHERS.

Material on teachers as distinct from teaching is included in this section. Methods of teaching is section 371.3.

130. **Lang, O. H.** The status of the teacher in the United States.^{*} Observations of a German educational expert. (Forum, July, 39: 60-71.)

A review of the book *Volksschule und Lehrerbildung der Vereinigten Staaten* . . . written by Dr. F. Kuypers, a member of the German educational commission that spent seven weeks in this country in 1904. Author discusses feminization of our schools, equal pay for equal work, compulsory education, and the fact that there seemed to him to be no real profession of teaching in this country.

131. **New York City teachers' association.** Report of the committee on the promotion of teachers. 75 p. O. The ass'n, gratis.

A study of the methods of promotion in over 50 cities, with separate accounts of the systems in New York, Chicago, St. Louis, Boston, London, and Baltimore.

132. **Palmer, G. H.** The ideal teacher. (Atlantic, Apr., 90: 433-42.)

Declares that "teaching as a trade is poor and disappointing business, but entered as a profession there are few employments more satisfying."

133. **Plan for official advisory organization of the teaching force of Chicago.** (Elem. school teacher, Feb., 7: 305-10.)

Report of the subcommittee of the school management committee of the board of education of Chicago, appointed to report upon the whole subject of an advisory organization of the teaching body. The resulting plan provides for a representation of the teachers when educational matters are considered by the Chicago school board. See also editorial in same number, p. 361-367.

134. **Spaulding, F. E.** The unassigned teacher in the schools. (School rev. Mar., 15: 201-16.)

Describes the work of the teacher without a class, with special mention of experiences in Newton, Mass. Devotes much attention to a discussion of the evils of rigid grading.

135. **Tuell, H. E.** The public school teacher and promotional examinations. (Educ. Dec., 28: 217-23.)

Comments upon the new system of promotional examinations for teachers in Boston and states facts to prove that ability to pass a required examination can not be a satisfactory test of a teacher's merit.

136. **Van Storm, Ashley.** Minimum qualifications of the elementary teacher. (In N. E. A. Proc. p. 239-52.)

371.12. TRAINING OF TEACHERS.

See also section 370.7.

137. **Bolton, F. E.** The preparation of high school teachers: what they do receive and what they should receive. (School rev. Feb., 15: 97-122.)

Discusses existing State legislation designed to secure good high school teachers. There is great lack of uniformity in requirements for teaching and of effective laws to eliminate poor teachers. American standards are compared with German.

138. **Bolton, F. E.** The relation of the department of education to other departments in colleges and universities. (*Jour. of ped.* Dec. 1906-Mar. 1907, 19: 137-76.)

"An attempt is made to show clearly the proportions which the work has assumed, class of students accepted, the kind of work prepared for, the intimate relation which the department bears toward the rest of the institution, the relation to the State, and the distribution of the work within the department." Many of the data presented were secured by a questionnaire.

See also No. 145, below.

139. **Chabot, Charles.** The professional training of teachers in France. (Congress of arts and sciences. Houghton. v. 8, p. 176-91.)

Address at the St. Louis exposition, 1904.

140. **Great Britain—Education, Board of.** . . . General report on the instruction and training of pupil-teachers, 1903-1907, with historical introduction. Presented to both houses of Parliament. 219 p. Q. ([*Gt. Brit. Parliament. Papers by command*] Cd. 3582.)

The 30-page historical introduction is of special value.

141. ——— The education and training of the French primary school teacher. 222 p. O. (Special reports on educational subjects. v. 18.)

CONTENTS.—Curricula of French higher primary schools, pp. 1-82; Life in a French higher primary school, by A. M. Saville, pp. 83-124; Summary of official regulations affecting the training and position of teachers in State primary schools, in France, by H. E. Matheson; The French training college system, by B. Dumville, pp. 159-222.

Farrington: The Public Primary School System of France, 1906, while covering much the same ground, is fuller in historical material than the present volume and less detailed in presentation of curricula and their contents. The professions of primary and secondary teacher in France are entirely distinct, and the slight opportunities for the pupil-teacher contrast strongly with English and American methods.

142. **Ladd, A. J.** École normale supérieure; an historical sketch. 61 p. O. Herald pub. co., Grand Forks, N. D. 50c.

Doctor's dissertation, Michigan, 1904.

143. **National education association.** Report of the committee of seventeen on the Professional preparation of high-school teachers. (In *N. E. A. Proc.* p. 523-668.)

The introduction (15 pages) was published in *School Review*, Sept., 1907, and the entire report is also published separately.

144. **Ruedeger, W: C.** Recent tendencies in the normal schools of the United States. (*Educ. rev. Mar.*, 33: 271-87.)

A comparative study, based chiefly on data obtained from 51 pairs of normal school catalogues, ten years apart, showing changes in normal school work and conditions as to equipment, students, and contents of curriculum.

145. **Sutton, W. S.** The organization of the department of education in relation to the other departments in colleges and universities. (*Jour. of ped.* Dec. 1906-Mar. 1907, 19: 81-136.)

An historical survey of the professional education of teachers is followed by a discussion of its present status in America, based upon responses to a questionnaire and disclosing great variety in the plans of organization in 42 institutions. Brief mention is made of the study of education in leading foreign universities.

Two appendixes are:

A. Table showing courses in education at German universities, 1905-6.

B. Historical data concerning evolution of the professional education of teachers in American colleges and universities, with plans for the organization of educational work therein.

371.16. TEACHERS' SALARIES.

146. **Association of men teachers and principals of the city of New York.**
The grounds of opposition to the White bill. 48 p.

During its 1907 session the legislature of the State of New York gave much attention to a bill (senate 1218) providing for an increase in the salaries of certain women teachers in the schools of New York City. When the bill reached Governor Hughes he vetoed it, and his objections are printed in full in *Educational Review*, September, 1907, pp. 211-213. The above pamphlet prints the text of the bill and some arguments against "equal pay for equal work," regardless of sex. The bill was reintroduced in the session of 1908, but failed of passage.

147. **The compensation of college teachers.** (In *Association of colleges and preparatory schools of the middle states and Maryland*. Proc. of twentieth annual convention, 1906. p. 18-44.)

Papers by J. D. Moffatt, J. B. Fletcher, and E. E. Hale, Jr., with discussions by W. A. Lamberton and Thomas Fell.

148. **Cooley, E. G.** The basis of grading teachers' salaries. (In *N. E. A. Proc.* p. 94-103.)

149. **Cotton, F. A.** Teachers' salaries and how affected by the operation of the minimum-salary law. (*N. E. A. 50th anniv. vol.* p. 132-141.)

The author, State superintendent for Indiana, describes the law in that State and how it works. In the discussion similar laws in Pennsylvania and West Virginia are described.

150. **Fletcher, J. B.** The compensation of college teachers. (*Educ. rev. Jan.*, 33: 77-86.)

Paper read before annual meeting of the Association of Colleges and Preparatory Schools of the Middle States and Maryland at Philadelphia, November, 1906.

Shows that the responsibility for reform in the matter of the compensation of college teachers rests with the faculty.

151. **Hutchins, H. B.** Should men bearing the same title in any institution receive the same pay. (In *Association of American universities. Journal of proceedings and addresses of eighth annual conference, 1907.* p. 92-99.)

152. **McAndrew, William.** Where education breaks down. (*Educ. rev. Jan.*, 33: 11-23.)

A résumé of the salary conditions among teachers, comparing them with those in other callings. The author complains of a lack of professional enthusiasm and on this point is answered by Isabella M. Blake in same volume, pp. 522-526.

153. **Stillman, J. M.** Relations of salary to title in American universities. (In *Association of American universities. Journal of proceedings and addresses of eighth annual conference, 1907.* p. 72-91.)

Also in *Science*, February 25, pp. 241-259.

Concludes that a maximum efficiency of university work and a minimum of administrative difficulty resulting from inequalities in pay in the same grade will be attained by a minimum or normal salary for each grade by reasonable increases dependent upon length of efficient service and with freedom to recognize unusual ability or distinguished service as the requirements of the case may demand. Article closes with quotations from answers to a circular letter sent to presidents and faculty members.

154. **Tanner, A. E.** Salaries of women teachers in institutions of collegiate rank. (*Ass'n of collegiate alumnae. Special bull. Ser. 3, no. 15.*)

Discusses maximum and minimum salaries in 14 American women's colleges.

155. **Van Sickle, J. H.** What should be the basis for the promotion of teachers and the increase of teachers' salaries? (N. E. A. 50th anniv. vol. p. 177-183.)

Describes the new arrangement in Baltimore.

371.17. PENSIONS FOR TEACHERS.

156. **The best means of introducing the pension system into American universities. Discussion.** (In Association of American universities. Journal of proceedings and addresses of eighth annual conference, 1907. p. 64-71.)

The Carnegie Foundation is the theme.

157. **Carnegie foundation for the advancement of teaching.** Papers relating to the admission of state institutions to the system of retiring allowances of the Carnegie foundation. 45 p. Q. (Bulletin no. 1.)

As the Foundation bases the distribution of its pensions on the qualifications of institutions, not individuals, it is necessarily concerned with the organization and curricula of those institutions which wish to share in its funds. This Bulletin is the first of a series which will furnish data as to entrance requirements, financial resources, and equipment of many American universities and colleges.

158. ——— **Second annual report of the president and treasurer.** 124 p. Q. 576 Fifth ave., N. Y. No price.

It is remarkable how rapidly and how intelligently the work of this great foundation has progressed in two years. The standardizing of American institutions for higher education is a by-product of the financial work of the foundation. The statistical and historical material included in this report is of reference value.

159. **Jastrow, Joseph.** Advancement of teaching. (No. Amer. rev. 7 Oct., 186: 213-24.)

Commends the spirit of the Carnegie Foundation for the Advancement of Teaching, but opposes the exclusion of State universities. Believes that increase of salary would be more effective in the advancement of teaching than the most liberal of pension systems.

160. **Keyes, C: H.** Teachers' pensions. (In N. E. A. Proc. p. 103-08.)

Statement of reasons why pensions should be provided for teachers in public schools, and account of some ways in which the matter is managed in the United States.

371.2. ORGANIZATION AND ADMINISTRATION OF THE SCHOOL; THE SUPERINTENDENT.

See also section 370.15 and the papers read at the meeting of the N. E. A. Department of Superintendence, and printed in the annual volume of Proceedings.

161. **Allen, W. H.** School efficiency. (In his Efficient democracy. Dodd, Mead, \$1.50. p. 113-41.)

A study of the statistical method as basis for intelligent progress in conducting the school. Shows what is lost in school efficiency by lack of proper methods of record and later use of such records as correctives and guides.

162. **Jackman, W. S.** Relation of school organization to instruction. (Pop. sci. mo. Feb., 70: 120-33.)

Paper read before the Social Education Congress, Boston, November, 1906, indicates some of the most important changes needed in present school organization in order that the school may be operated as a social institution.

371.23. VACATION SCHOOLS.

163. **Great Britain—Education, Board of.** School excursions and vacation schools. 89 p. O. (Special reports on educational subjects. v. 21.)

In a brief historical introduction school excursions are traced back to the traveling scholars of the Middle Ages. The French Alpine club and the holiday home at Contrexéville are briefly noticed, after which follow chapters on vacation schools, country schools for backward children, and school journeys. These are mainly descriptions of the methods and work of specific examples, chiefly in England. The volume is the work of J. E. G. de Montmorency.

371.25. CLASSIFICATION OF PUPILS.

See also No. 134.

164. **Garber, J: P.** A rational system of classification and promotion. (Educ. Jan., 27: 288-302.)

Discusses advantages and disadvantages of several of the commoner methods of classification, states some of the fundamental principles which should underlie a rational system of grading, and notes certain fallacies connected with classification and promotion.

371.28. PROMOTIONS.

165. **Hartwell, C: S.** Liberating the lower education. (School rev. June, 15: 436-58.)

Discusses quality, not quantity, for promotion, and three-year high school courses; giving tabulated statistics, compiled from questionnaires sent to various classes of educators.

166. ——— Promotion by subject and three-year courses. (School rev. Mar., 15: 184-96.)

Shows some of the evils of rigid grading and quotes actual experiences to prove that flexibility in grading is entirely practicable. While the past tendency has been to sacrifice the child to the system, it is being more generally recognized that system must yield to the child.

371.3. METHODS OF INSTRUCTION.

For methods in special subjects, see section 375 and its subdivisions. See also Nos. 33, 37, 43.

167. **Adamson, J: W., ed.** (The) practice of instruction; a manual of method, general and special. 512 p. D. National Society's Depository, 4s. 6d.

The "general" chapters fill 125 pages, treating the theory of education with emphasis on Herbart's psychology and discussing the curriculum as a whole. Then 8 chapters as follows: Religious instruction—A. C. Headlam. The mother tongue—J. W. Adamson. Geography—A. J. Herbertson. History—M. A. Howard. Mathematics—A. H. Baker. Natural science—T. P. Nunn. Latin and Greek—W. H. D. Rouse. Modern languages—W. M. Poole.

168. **Bagley, W: C.** Classroom management; its principles and technique. 322 p. D. Macmillan, \$1.25.

"The author intends his work for the student of education in normal schools and colleges who is preparing for elementary teaching. He has gathered his data from observing good teachers, from text-books, from his own experience, and from psychology. The routine factors of class-room management start with the daily programme, punctuality, hygiene, order, discipline, and penalties. Attention he treats under several laws and then discusses the technique of class instruction, giving a whole chapter to the Batavia system. He tells how he would test results, dispose of the teacher's time, treats of the teacher's relations to the principal, supervisor, and superintendent, and concludes with the ethics of school craft." Pedagogical Seminary.

169. **Chapin, C. S.** Departmental teaching in the grammar grades. (*Educ. Apr.*, 27: 505-14.)

Considers the whole subject still in the experimental stage. Cites the chief arguments, pro and con, followed by a statement of the conditions necessary for success.

170. **Harris, W. T.** How the superintendent may correct defective classwork and make the work of the recitation teach the pupil how to prepare his lesson properly. (*N. E. A. 50th anniv. vol.* p. 341-351.)

171. **Kilpatrick, V. E.** The adaptation of departmental teaching to elementary schools. (*Educ. rev. Apr.*, 33: 356-67.)

An examination of the principles underlying departmental teaching is followed by a detailed statement of how it may be undertaken by any elementary school.

172. **Mahony, J. J.** The problem of the poor pupil. (*Educ. Dec.*, 28: 197-212.)

Describes the Batavia system of individual instruction and flexible grading schemes of several cities, and acknowledges that plenty of valuable experimenting has been done, but lack of cooperation has led to no educational doctrine. What is most needed now is an attempt through an intelligent application of pupil study, through a close cooperation between the home and the school, to discover just why the pupil is poor.

173. **Sachs, Julius.** The departmental organization of secondary schools. (*Educ. Apr.*, 27: 484-96.)

The proper conception of departmental organization in the high school involves much more than mere specialization. The hope of a real departmental organization must lie in the broad training and accurate attainments of the teachers.

174. **Theobald, H. C.** (The) Filipino teacher's manual. 260 p. D. World Book Co., \$1.50.

175. **Winterburn, R. V.** Methods in teaching; being the Stockton methods in elementary schools. 355 p. D. Macmillan, \$1.25.

The Stockton methods are those used in the schools of Stockton, Cal., and attention was called to them by striking exhibits at the St. Louis and Portland expositions. Hundreds of letters to the Stockton school board asking for details determined them to print this book, which is edited by a former supervisor of English and history. "The Stockton methods seek to employ all the mental faculties of the child simultaneously in order to accomplish their union as soon as possible."

371.42. MANUAL TRAINING.

See also a chapter in No. 49.

176. **Council of supervisors of the manual arts.** Yearbooks 1906-7. v. 6-7. The Sec'y. Hastings-on-Hudson, N. Y. \$3 each.

The papers treat chiefly of the actual work in the school in drawing, design, woodwork, and specific handicrafts or trades.

177. **The development of an adequate course of study in manual training for elementary grades.** (In *N. E. A. Proc.* 760-78.)

1. From the point of view of the teacher of manual arts, by A. Ahrens.
2. From the point of view of child study, by F. B. Dresslar.
3. From the point of view of the school superintendent, by C. H. Keyes.

178. **Harvey, L. D.** Manual training in the grades. (*Elem. school teacher*, Mar., 7: 390-407.)

Emphasizes and estimates the value of manual training to the individual, and favors its use in all of the 12 grades.

371.5. GOVERNMENT, DISCIPLINE, PUNISHMENT.

See also No. 210, below.

179. **Griffiths, F. P.** Student self-government at the University of California. (University of California chronicle, July, 9: 240-55.)
180. **Thompson, W. O.** Self-government by students in school and college. (Social education quarterly, Mar. 1: 41-53.)

371.52. ATTENDANCE.

181. **Thorndike, E. L.** The elimination of pupils from school. 63 p. O. Government printing office. U. S.—Education Bureau. Bulletin 4, 1907.)

A statistical study, carefully done and accurately grounded, of what pupils stay in school, how long they stay, what grades they reach, and why they leave. The significance of the results for the immediate problems of school administration are briefly suggested.

371.55. CORPORAL PUNISHMENT.

182. **Du Bois, Patterson.** The failure and immorality of corporal punishment. (In his Culture of Justice. Dodd, Mead, 75c. p. 200-27.)

371.6. SCHOOL BUILDINGS AND FURNITURE.

183. **Boston—School committee.** Report of committee of oculists and electricians on the artificial lighting and color schemes of school buildings. 20 p. O. (Boston School Doc. 1907, no. 14.)

Gives chart of colors recommended for walls; of location of lights in standard schoolroom; cuts and full description of the tungsten-light fixtures recommended.

184. **Olsen, J. W.** Rural school architecture. (N. E. A. 50th anniv. vol. p. 141-148.)

Two plans and elevations are given for one and two room buildings costing, respectively, \$800 and \$2,800.

185. **Two recent high schools.** (Architects and builders' magazine, Mar. n. s. 8: 251-65.)

Includes description and plans of the Jersey City high school and the De Witt Clinton high school, New York City.

186. **Wisconsin—Dept. of education.** The school beautiful, by Maud Barnett. 94 p. Q. C. P. Cary, state superintendent, Madison.

Minute, practical suggestions and directions for securing more attractive and healthful school buildings and grounds. Helpful plans and pictures.

371.64. SCHOOL LIBRARIES; LIBRARIES AND SCHOOLS.

See also the papers printed in the N. E. A. Proc. pp. 961-982, under the library department.

187. **Axon, W. E. A.** The library in relation to knowledge and life. (Congress of arts and sciences. Houghton. v. 8, p. 203-15.)

188. **Blagi, Guido.** The library—its past and future. (Congress of arts and sciences. Houghton. v. 8, p. 216-29.)

After sketching the rise and development of libraries, Doctor Blagi forecasts the future, which, he thinks, will be particularly marked by international co-operation, the use of photography, the gramophone, and a greatly increased use of the card.

189. **Crunden, F. M.** The library in education. (Congress of arts and sciences. Houghton. v. 8, p. 195-202.)
190. **MacDowell, L. I.** A public school library system. (Educ. rev. Nov., 34: 374-84.)

Contains practical suggestions for the organization of a successful school library. Describes the systems in New York City, Utica, Newark, Baltimore, Chicago, and St. Louis. Lays special stress on the advantages of class libraries.

371.7. SCHOOL HYGIENE.

An important second triennial congress on school hygiene was held in London, August 5-10, 1907. Its papers have not been published, but accounts of the meeting are in *Pedagogical Seminary*, December, 1907; *Nineteenth Century*, September, 1907, pp. 388-394, and *London Journal of Education* for September, 1907, pp. 607-610.

191. **Ainge, T. S.** The ventilation of school buildings. (Jour. Mich. med. soc. June, 6: 271-80.)
192. **Clay, Arthur.** School feeding question in England. (Charities, 19 Jan., 17: 699-707.)
- Brief account of the various recent English experiments with this work. Verdict rather against its usefulness.
193. **Cronin, J. J.** Doctor in the public school. (Rev. of Rev. Apr., 35: 433-40.)
- Startling results of rigid medical inspection in New York City.
194. **Douglas, C. C.** The laws of health; a handbook on school hygiene. 240 p. D. Blackie, 3s.
- Principally physiological.
195. **Elkington, J. S. C.** Health in the school; or hygiene for teachers. 192 p. D. Blackie, 2s.
196. **McMillan, Margaret.** Labour and childhood. 205 p. D. Sonnenschein, 3s. 6d.

Chapter 9, "The hygiene of instruction," states the case for medical inspection. Chapter 10, "The school doctor in other lands," is an account of what has been done in Germany, mainly in Wiesbaden, while chapter 11, "The school doctor at home," tells what has not been done in England, and why and how more should be done.

The book is not about child labor, but a study of education through labor, with emphasis upon the part which good health plays in it.

197. **New York committee on physical welfare of school children.** An examination of the home conditions of 1400 New York school children found by school physicians to have physical defects. (Amer. statistical ass'n. Quarterly publications. June, 10: 271-316.)

Present the startling conclusion that if the 1,400 children examined are representative American school children there are 12,000,000 children in the United States so defective physically as to need attention. A comprehensive plan of medical inspection and instruction in hygiene is given. This investigation is a result of the now famous Associated Press item from Washington in 1905 that 70,000 New York children went breakfastless to school.

198. **Richards, H. M.** The medical inspection of school children. (Jour. Royal Sanitary Inst. July, 28: 251-63.)
199. **Scott, W. D.** Sacrifice of the eyes of school children. (Pop. sci. mo. Oct., 71: 303-12.)

Excessive destruction begins several years earlier than was formerly the case in America, and earlier than is still the case in Germany and other foreign

countries. Badly lighted schoolrooms come in for their share of blame, but author believes the fact that our infants are reading more books both in and out of school is largely responsible for the poor eyesight of children.

371.73. PHYSICAL TRAINING; GYMNASTICS; ATHLETICS.

See also papers printed in the N. E. A. Proc., pp. 925-950.

200. **Derby, R. A.** College athletics. (Outlook, 5 Oct., 87: 254-8.)
Protests against present conditions, and urges the adoption of a new system which will lessen rivalry in intercollegiate athletics and generalize the interest.
201. **Fuld, L. F.** Physical education in Greece and Rome. (Amer. phys. educ. rev. Mar., 12: 1-14.)
202. **Grant, P. S.** Physical deterioration among the poor in America. (No. Amer. rev. 1 Feb., 184: 254-67.)
203. **Hetherington, C. W.** Analysis of problems in college athletics. (Amer. phys. educ. rev. June 12: 154-81.)
204. **Johnson, G. E.** Education by plays and games. 234 p. D. Ginn, 90c.
This revision of a "questionnaire" study in the Pedagogical Seminary in 1894 is a useful and practical contribution from the superintendent of playgrounds, recreation parks, and vacation schools in Pittsburg.
205. **Lowman, G. S.** Regulation and control of competitive sport in the secondary schools in the United States. (Amer. phys. educ. rev. Sept., 12: 241-55; Dec., 12: 307-23.)
A summary of the answers to a questionnaire sent to 881 schools. The September issue includes public schools and the December issue private schools and academies. Author concludes that athletics in academies are in healthier condition and better managed than athletics in public high schools.
206. **Newcomb, Simon.** University athletics. (No. Amer. rev. 21 June, 185: 353-64.)
Condemns present system of athletics. Believes physical development of our students will be best promoted by entirely abandoning intercollegiate contests and making games of strength purely local and personal affairs.
207. **Sargent, D. A.** The academic value of college athletics. (Educ. Feb., 27: 317-25.)
Advocates the recognition of the educational value of physical training and athletics as a remedy for many of the present abuses and evils. Suggests making them essential features of the college curriculum with due academic credit.
208. **Stewardson, L. C.** Physical training and athletics. (Educ. rev. Nov., 34: 385-97.)
A plea for reform in college athletics. What is needful at present is not condemnation, but sympathetic treatment of the whole problem by those who know what sport is.

371.8. STUDENT LIFE, CUSTOMS, SOCIETIES.

209. **Copeland, Arthur.** Men and days in Phi Beta Kappa. 143 p. O. Du Bois, \$1.
A brief account of the origin and growth of the society, with list of chapters, distinguished members, the constitution, and a more particular account of the chapter at Syracuse University by which this volume is issued.

210. **Cronson, Bernard.** Pupil self-government; its theory and practice. 107 p. D. Macmillan, 90c. net.

This work treats first the genesis of the movement and the causes of its success and failure and its relations to the teachers. Obedience is its means, appreciation its method, and life activities its material. As to conditions, there must be a proper ideal, competent principal and teachers, gradual introduction of the scheme, and power to enforce it. One chapter discusses the ethics of the movement, its relations to life, at home, out of doors, in school, and to individual welfare; its influence in enforcing obedience to law, its relations to citizenship, common welfare, the government, and especially the rise of representative government, are treated. There are eight full-page illustrations and plenty of blank sheets for notes. Author is principal of Public School 3, Manhattan, N. Y.

371.9. EDUCATION OF SPECIAL CLASSES.

See also papers printed in N. E. A. Proc., pp. 983-999, under the department of special education.

211. **Maennel, B.** (The) auxiliary schools of Germany. 137 p. O. Government printing office. (U. S.—Education Bureau. Bulletin 3, 1907.)

A free translation of *Vom Hilfsschulwesen*, a recent German account of the educational provisions in that country for backward, defective, and subnormally endowed children. Full statements are given as to admission procedure, health conditions, classification of pupils, the curriculum, and methods of discipline and instruction. The monograph should be useful wherever such work is being done or is to be attempted in this country.

212. **The Psychological clinic:** A journal for the study and treatment of mental retardation and deviation; edited by Lightner Witmer. Published by Psychological clinic press, Philadelphia, \$1 per year.

First number appeared in March, 1907. Published primarily in the interest of a large class of children who manifest different degrees of retardation in mental and moral development. It presents the results of investigation conducted mainly through examination and treatment of individual mental and moral peculiarities. It will also take cognizance of all forms of special work for mentally and physically defective children and juvenile delinquents and dependents. Of interest to physicians, social workers, psychologists, and educators. The following important articles appeared in 1907:

A method for determining the extent and causes of retardation in a city school system, by J. E. Bryan. The fifteen months' training of a feeble-minded child, by Lightner Witmer. Public day schools for backward children, by C. H. Town. Need for special classes in the public schools, by J. D. Hellman. Mental condition of juvenile delinquents, by I. H. Coriat. Retardation through neglect in children of the rich, by Lightner Witmer.

213. **Snedden, D. S.** Administration and educational work of American juvenile reform schools. 207 p. O. Columbia Univ. \$2. (Teachers coll. cont. to educ. no. 12.)

Describes the educational ideals, methods, and results of these institutions, which are so distinctly apart from our general system of public or private education.

214. ——— The public school and juvenile delinquency. (Educ. rev. Apr., 33: 374-85.)

Urges that "between the parent on the one hand (with the cooperation of his church) and the public school on the other (representing the State in its contribution to the custody and education of children) there should be no middle ground left to the unorganized efforts of charity and voluntary effort, however well-meaning these may be."

371.94. NEGRO EDUCATION.

215. **Hampton negro conference.** Eleventh annual report. 109 p. O. Hampton. The institute press. Published as the Hampton bulletin, vol. 3, no. 3.

W. T. B. Williams; Colored public schools. pp. 39-56.

371.95. INDIAN EDUCATION.

See also papers printed in the N. E. A. Proc., pp. 1001-1030, under the department of Indian education. The annual report of the superintendent of United States Indian schools to the Commissioner of Indian Affairs gives current news affecting the education of the Indian.

216. **Indian rights association.** Twenty-fourth annual report for the year 1906. 104 p. O. 1305 Arch st., Phil.
- 216a. **Lake Mohonk conference of friends of the Indian and other dependent peoples.** Proceedings of the twenty-fifth annual meeting, Oct. 23-25, 1907. 207 p. O. H. C. Phillips, Mohonk lake, N. Y. Gratis.

372. ELEMENTARY EDUCATION.

See the N. E. A. Proc., pp. 475-519, for papers read in the department of elementary education.

For additional material on elementary education see *The Elementary School Teacher*, published monthly, except during July and August, by the University of Chicago elementary school.

See also nos. 26, 53, 130.

All material on child study has been omitted, as this subject is thoroughly covered in the annual bibliography compiled by L. N. Wilson; that for 1906 appears in the *Pedagogical Seminary*, 14: 329-354.

217. **Bridgham, Alice.** *Day by day in the primary school.* 3 v. O. Barnes, \$4.
CONTENTS.—v. 1, The autumn months; v. 2, the winter months; v. 3, the spring months.

A programme of suggestions, hints, and directions for enriching, planning, and carrying out schoolroom work on every day of the year. Prepared by a primary teacher who has proved its value in her own school. Covers all subjects. Accompanied by many simple outline sketches and diagrams for blackboard and paper work.

218. **Chapin, C. S.** *Departmental teaching in the grammar grades.* (Educ. Apr., 27: 505-14.)

A summary of chief arguments pro and con.

219. **Great Britain—Education, Board of.** *The education and training of the French primary school teacher.* 222 p. Q. (Special reports on educational subjects. v. 18.)

More fully described under No. 141.

220. **Horace Mann elementary school.** (Teachers coll. record, Jan., 8: 1-104; May, 8: 167-248; Sept., 8: 249-350.)

Continuing articles which appeared in January and September, 1906, and were devoted to a description of the work in the first, second, and third grades. The January number of the present volume covers the fourth and fifth grades, the May number the sixth grade, and the September number the seventh.

221. **Kilpatrick, V. E.** *The adaptation of departmental teaching to elementary schools.* (Educ. rev. Apr., 33: 356-67.)

An examination of underlying principles, with a detailed statement of how it may be undertaken by any elementary school.

222. **Thomas, A. B.** *(The) first school year; a course of study with selection of lesson material, arranged by months, and correlated for use in the first school year.* 208 p. D. Flanagan, 60c.

373.2. KINDERGARTEN.

For additional kindergarten material see the files of the *Kindergarten Review*, the *Kindergarten Primary Magazine*, and the N. E. A. Proc., p. 455-74.

223. **International kindergarten union.** Proceedings of the fourteenth annual meeting, New York, April, 1907. 136 p. O. Anna H. Littell, Secy., 3 Forest ave., Dayton, O.

224. **National society for the scientific study of education.** The Kindergarten and its relation to elementary education. 138 p. O. (Yearbook 6, pt. 2.)

Thoughtful papers containing much cogent argument and admirable statement. They are: The psychologic basis of the kindergarten—E. A. Kirkpatrick; An interpretation of some Froebelian principles—Maria Kraus-Boelté; Conservative and progressive phases of kindergarten education—Patty S. Hill; Evolution of the kindergarten problem—Harriette M. Mills; History of kindergarten influence in elementary education—Nina C. Vandewalker. Reviewed in Kindergarten Magazine, February, 1908, pp. 224-226.

373. PRIVATE SECONDARY SCHOOLS.

Great Britain.

225. **Leach, A. F.** History of Warwick school. 278 p. O. Constable, 10s.
226. **The public schools from within;** a collection of essays on public school education, written chiefly by schoolmasters. 320 p. O. Low, 3s. 6d.

Thirty-two short chapters on the subjects of instruction, moral and social influences, physical and athletic life, historical and descriptive. Reviewed in Athenæum, May 4, 1907.

375. THE CURRICULUM: METHODS IN SPECIAL BRANCHES.

See also Nos. 109, 392.

All discussions of special subjects are here, whether they concern university, college, special school, secondary or elementary school, except as they relate to college entrance requirements. For those, see section 378.01.

227. **De Garmo, Charles.** Principles of secondary education; a text-book. 299 p. D. Macmillan, \$1.25.

A separate description and analysis of the content of each secondary school study to determine its inherent and comparative educational value, and upon the basis of the values thus established to further determine the best possible combination of studies into curricula. One-third of the book is filled with representative programmes of the various types of secondary schools in this and other countries.

The book is planned as a text-book for college and university classes. A second volume is to follow in 1908.

228. **Greenwood, J. M.** A seven-year course for elementary schools and a five-year course for secondary schools. (Educ. May, 27: 550-55.)

A continuation of the author's argument in Education for April and May, 1903, favoring a seven-year course in the grades. He does not believe that the year thus saved should be added to the high school course.

375.04. ELECTIVE STUDIES.

229. **Adams, C. F.** Some modern college tendencies. (In his Three Phi Beta Kappa addresses. Houghton, \$1. p. 101-47.)

A summary of objections to the elective system. In a "Supplementary Note" added since this address was first printed in Educational Review, 32: 132. Mr. Adams replies to his critics.

375.2. THE TEACHING OF THEOLOGY.

230. **Berle, A. A.** The education of a minister. (Bibliotheca sacra, Apr., 64: 283-98.)

The great need is "real effective training of the minister with some relation to the things he is going to do."

231. Berle, A. A. Rout of the theological schools. (*Bibliotheca sacra*, July, 64: 566-87.)
232. Buckham, J. W. Modern theological education. (*Bibliotheca sacra*, Jan., 64: 135-47.)

Discusses the curriculum of theological seminaries, and states that a comparison of the courses offered by prominent seminaries of different denominations proves that all theological education is in a state of transition.

375.3. THE TEACHING OF SOCIOLOGY.

233. Ellwood, C. A. How should sociology be taught as a college or university subject? (*Amer. jour. of soc. Mar.*, 12: 588-06.)

375.34. LEGAL EDUCATION.

234. *American law school review*; an intercollegiate law journal. v. 2, Nov. 1906 to Dec. 1907; 3 numbers. West pub. co.

Reports the annual meeting of the Association of American Law Schools, and prints short articles of value and interest to law students.

235. *Symposium on the value of humanistic, particularly classical, studies as a preparation for the study of law, from the point of view of the profession.* (*School rev.* June, 15: 409-35.)

I. Value to the lawyer of training in the classics, by Merritt Starr.

II. Study of Greek and Latin as a preparation for the study of law, by Lyden Evans.

III. Humanistic, and particularly classical, studies as a preparation for the law, by H. B. Hutchins.

IV. Discussion of first three papers, by H. P. Davock.

V. Discussion of the first three papers, by H. E. Spalding.

VI. Concluding remarks, by L. I. Barbour.

VII. Appendix to paper of Mr. Merritt Starr.

Papers read at the Classical Conference at Ann Arbor, Mich., March, 1907.

236. Vance, W. R. Legal education in the South. (*Geo. Washington univ. bulletin.* v. 6, no. 3, p. 18-27.)

Also in Proceedings of the American Bar Association, 1907. An account on present conditions and opportunities.

375.4. LANGUAGE IN THE CURRICULUM.

237. O'Shea, M. V. Linguistic development and education. 347 p. D. Macmillan, \$1.25.

A study of the psychology of linguistic development in young children and its relations to and significance in the formal teaching of languages. The study is based upon close observation of several children (the author's own, we strongly suspect) for a term of years, upon the results of experimental language teaching in model schools, and upon personal investigations of methods of language teaching at home and abroad.

375.5. SCIENCE IN THE CURRICULUM.

238. Mann, C. R. The meaning of the movement for the reform of science teaching. (*Educ. rev.* June, 34: 13-25.)

Read at annual meeting of North Central Association of Colleges and Secondary Schools at Chicago, March, 1907.

239. *New York state science teachers association.* Proceedings of the eleventh annual conference, N. Y. City. Dec. 26-27, 1906. 185 p. O. Albany, Educ. dept. No price. (*Secondary education bulletin* 34.)

240. **Woodhull, J. F.** Science for culture. (School rev. Feb., 15: 123-33.)

Science can make for humanism instead of, as too often now, for mere information and utility. To do so, however, it should be divorced from syllabus and examination.

375.507. NATURE STUDY.

For additional material on nature study consult the files of the Nature Study Review. Material on school gardens is found in section 375.63.

241. **Bigelow, E. F.** (The) spirit of nature study; a book of social suggestion and sympathy for all who love or teach nature. 222 p. D. A. S. Barnes & Co., \$1.

375.51. MATHEMATICS.

242. **Myers, G. W.** The year's progress in the mathematical work of the University high school. (School review, Oct., 15: 576-93.)

Describes the methods in use at the Chicago University high schools for testing a modern curriculum for high school mathematics.

243. **Newcomb, Simon.** The teaching of arithmetic. (N. E. A. 50th anniv. vol. p. 86-102.)

244. **Tilley, C. E.** Accuracy in mathematics and science. (Educ. Apr., 27: 467-77.)

How to secure it in greater measure.

245. **Young, J. W. A.** (The) teaching of mathematics in the elementary and the secondary school. 351 p. O. Longmans, Green & Co., \$1.50.

An exposition of the pedagogy of mathematics in elementary and secondary grades. Various distinct methods are described and compared. Many useful miscellaneous points of method and mode are treated. Chapters on the preparation of the teacher and the material equipment are followed by the most extensive and important part of the book, the teaching of arithmetic, geometry, and algebra. Full bibliographies accompany the text.

375.6. TECHNICAL AND INDUSTRIAL EDUCATION; ENGINEERING.

See also papers printed in the N. E. A. Proc., pp. 1031-1061, under the department of technical education. See also section 371.42, manual training, and No. 412 below.

246. **Behrend, B. A.** Engineering education. 26 p. Q. B. A. Behrend, S. Norwood, Ohio, gratis.

Reprinted from the Electrical World, January 5, 1907.

247. **Burks, J. D.** Democracy in education. (Elem. school teacher, Nov., 8: 130-42.)

An argument for the introduction of vocational training into the public schools. Shows that the loss of pupils in the upper elementary grades is due to the ill-adaptation of our educational organization. Concludes that adequate provision for vocational training, beginning at about the sixth year of school, would tend to prolong the school life and increase the vocational efficiency of the great mass of children.

Also in N. E. A. Proceedings, 1907, pp. 787-796, with different title.

248. **Citizens' trade school convention.** Proceedings and addresses given at Indianapolis, June 10-12, 1907. 53 p. O. Winona Technical institute, gratis.

Addresses by Frank Gunsaulus, J. A. Emery, P. M. Kling, Walter H. Page, J. W. Van Cleave, Anthony Ittner, Arthur D. Dean.

249. **Draper, A. S.** Our children, our schools and our industries. 48 p. O. N. Y. State Educational dep't, gratis.

A strong showing of the utter inadequacy of American facilities for trade and industrial education, as compared especially with Germany.

250. **Duncan, R. K.** Temporary industrial fellowships at Kansas University. (No. Amer. rev. 3 May, 185:54-62.)

Established by commercial houses.

251. **Haney, J. P.** Vocational work for the elementary schools. (Educ. rev. Nov., 34:335-46.)

Considers the necessity of offering some form of vocational training in the elementary school, and recommends that for certain schools a modified form of the course of study be arranged to permit vocational training in the seventh and eighth years.

252. **Howard, E. D.** Cause and extent of the recent industrial progress of Germany. 147 p. O. Houghton, \$1.

In a chapter on industrial education stress is laid upon the intimate relation of school training to vocation. The character and extent of the general and industrial continuation schools are described.

253. **Industrial education.** (School rev. May, 15:375-99.)

Symposium by C. H. Thurber, H. J. Skeffington, and C. W. Hubbard at Harvard Teachers' Association. Second paper discusses the attitude of the trade-union and workingman. Third paper outlines effective industrial schools for a small factory community.

254. **Jackson, D. C.** Relations of engineering schools to polytechnic industrial education. (Science, 26 July, n. s. 26:104-11.)

255. **Jones, A. J.** (The) continuation school in the United States. 157 p. O. Government printing office. (U. S.—Education Bureau. Bulletin 1, 1907.)

This monograph argues the need of such schools by statistics showing the rapid decline of school attendance after the age of industrial worth is reached. It indicates briefly how much more extensive and efficient German and English schools of this type are than our own. The work of many typical American schools is described, and finally the place and purpose of the continuation school in our system of education are defined.

256. **Kehew, M. M., ed.** The movement for industrial education (Charities and the commons, 5 Oct., 19:803-64.)

A survey of present opportunities and immediate and future needs in the vocational training of American boys and girls.

CONTENTS.—H. S. Pritchett—A national society for the promotion of industrial education. S. M. Kingsbury—What is ahead for the untrained child in industry? Ralph Albertson—Decay of apprenticeship. P. H. Hanus—Industrial education in Massachusetts. C. F. Warner—Industrial training in the public schools. C. R. Richards—Private trade schools for boys. M. S. Woolman—Private trade schools for girls. F. M. Marshall—The public school and the girl wage-earner. R. A. Woods—Industrial education from the social worker's standpoint. A. G. Bookwalter—Continuation work.

257. **Mass.—Commission on industrial education.** First annual report. 71 p. O. State printers. (Public document 76.)

Massachusetts appreciates the need for and possibilities in industrial education, and in providing an effective machinery for moving in the matter. This report of a permanent commission takes as a starting point the conclusions presented by a preliminary commission last year. It covers less than a year, is inevitably little more than a clearing of the ground and a statement of the most obvious and urgent parts of a programme, chief among which is cooperation

with local authorities in the founding of schools for technical and industrial education; yet it is of great interest and suggestiveness as indicating some conclusions and problems which have been reached by a careful study of the situation in one of our greatest industrial States.

258. **National association of manufacturers**—Committee on industrial education. Report at twelfth annual convention, N. Y. City, May 20-22, 1907. (In Proceedings, p. 110-38.)

Discusses the necessity for trade schools and the attitude of labor unions toward them, and describes some of the newer American technical schools.

259. **National education association**. Report of the committee on industrial education in schools for rural communities. (In N. E. A. Proc. 409-54.)

Supplementary to report of July, 1905. Describes some effective and successful experiments in industrial education.

260. **National society for the promotion of industrial education**. Bulletins 1 to 4. 1907. C. R. Richards, Teachers college, N. Y. City.

1. Proceedings of the organization meetings.
2. Bibliography on industrial education.
3. Symposium on industrial education.
4. Industrial training for women, by Florence M. Marshall.

261. **Person, H. S.** Industrial education; a system of training for men entering upon trade and commerce. 86 p. O. Houghton, \$1.

This volume, which is one of the prize essays in the Hart, Schaffner & Marx series, deals with the training required by young men who would fit themselves for the higher positions in industry or commerce, and the need of providing such training in the United States. The need is now generally admitted. The author's opinion clearly is that while commercial training should be offered in high schools, collegiate courses, and professional departments, the ideal conditions can be found only in distinctly professional instruction, open solely to those who have already completed a liberal education. The question here raised is a large one, about which, as is well known, there is serious difference of opinion.

262. **Richards, C. R.** The problem of industrial education. (Manual training mag. April, 8: 125-32.)

Brief analysis of the economic, social, and educational aspects of the problem, with a statement of the functions and limitations of the various existing agencies for industrial training.

263. **Rollins, Frank**. Industrial education and culture. (Educ. rev. Dec., 34: 494-503.)

Address before Schoolmasters' Association of New York and Vicinity, Oct., 1907.

264. **Sadler, M. E., ed.** Continuation schools in England and elsewhere; their place in the educational system of an industrial and commercial state. 779 p. O. Sherratt & Hughes, 8s. 6d. (University of Manchester publications. Educational ser. No. 1.)

An important volume, in which are collected careful and competent accounts of the history and present status in Great Britain, of the various agencies for "further education," with 8 brief chapters on such schools in the chief European countries and the United States. The contributions of 18 different authors have been carefully edited by Professor Sadler (himself a considerable contributor), and the result is a veritable cyclopedia of information hitherto widely scattered or quite inexistant.

265. **Snowden, A. A.** The industrial improvement schools of Wuertemberg. (Teachers coll. record, Nov., 8: 351-423.)

Report presented is the outcome of some weeks spent in Wuertemberg during an investigation of vocational training in Europe.

"It sets forth briefly the economic conditions which hold in the kingdom of Wuerttemberg, the natural resources of the country, and the system of transportation. It then traces the development in this environment of the system of industrial schools and the service which they render in the upbuilding and maintenance of the state."

It also includes a brief description of other industrial and commercial schools of the kingdom, and an outline of the activities of the Wuerttemberg central bureau for industry and commerce.

266. Social education quarterly. June, 1907. 97 p. O.

Contains the following papers: The place of industrial education in the common school system, by F. P. Fish. Industrial education in a prairie State, by E. B. Andrews. American industrial training as compared with European, by F. A. Vanderlip. The problem of industrial education, by C. R. Richards. The needs from the manufacturers' standpoint, by M. W. Alexander. The importance of industrial education to the workingman, by John Golden. Bearings of industrial education upon social conditions, by R. A. Woods.

267. Stratton, G. F. Rising industrial problems: the new apprenticeship. (Eng. Mag. Dec., 34: 401-13.)

Indicates that the attitude of trade unions is hostile to attempts to recruit industrial workers through trade schools, but that they prefer and encourage shop training.

268. Vanderlip, F. A. Trade schools and labor unions. (In his *Business and education*. Duffield, \$1.50. p. 56-81.)

Great emphasis is laid upon the need for continuation trade schools to train, not the captains of industry, but the rank and file of the American industrial army. The German schools of this sort are cited as good examples. The slight comments on the attitude of labor and labor unions to such training are unimportant and argue that better-trained workmen will change the labor view point.

375.61. MEDICAL EDUCATION.

See also section 371.7 for material on school hygiene and medical inspection of schools. A list of American medical schools is in *Journal of the American Medical Association*, August, 1907, 49: 576-96.

269. American academy of medicine. Report of the committee on the value of the first degree in our American colleges. (Amer. acad. of med. Bulletin, Aug., 8: 193-248.)

Final report presented to 32d annual meeting of the American Academy of Medicine, at Atlantic City, June 1, 1907. A full discussion of the academic problems of medical education. While no conclusions were definitely stated, the tenor of the report indicated opposition to a full college course before the medical school, but favored a combined college and medical course, with subjects closely related to medicine begun early in the college work. A conference was recommended to discuss the subject further, which met in Pittsburg, January 1-2, 1908, and its discussions appear in the Bulletin for February, 1908.

270. Armstrong, H. E. The reform of the medical curriculum: a problem in technical education. (Science progress in the 20th century, 1: 544-56.)

Rejoinder by J. Wade, pp. 635-649.

271. Conference on the teaching of hygiene and temperance in the universities and schools of the British Empire. 129 p. D. John Bale, Sons & Danielsson. 2s.

Held in London, April 23, 1907. The papers discuss the teaching of these subjects in Canada, Australia, New Zealand, France, Scandinavia, and England.

272. Long, J. H. Preliminary medical education. (Science, 11 Oct., n. s. 26: 457-64.)

Based on a report to the council on medical education of the American Medical Association, April 29, 1907, which is in the *Journal of the American Medical Association* for May, 1907.

273. **Medical education in Scotland.** (Scottish med. and surg. jour. Oct., 21: 325-66.)

Gives curriculum and regulations at Edinburgh, Glasgow, and Aberdeen universities.

274. **Nutting, M. A.** The education and professional position of nurses. U. S.—Education, Comm'r of. Report for 1906. 1: 155-205.)

A monograph prepared in 1904. Considers the subject in the United States only.

275. ——— and **Dock, L. L.** History of nursing. 2 v. O. Putnam, \$5.

Chapters 4, 8, and 9, in volume 2, narrate the founding of the first training schools for nurses in England and America.

276. **Semon, Felix.** English and German education: a parallel. (British med. jour. Nov., 118: 1197-1206.)

Address delivered at opening meeting of medical society of Manchester, October 16, 1907. A detailed comparison of the methods of medical education in Great Britain and Germany. Advocates modification of the present English preliminary education.

277. **Tucker, W. G.** Educational democracy. 23 p. O. Albany, no price.

Reprinted from Albany Medical Annals, November, 1907, and in Science for November 8, 1907. Address delivered at the opening of seventy-seventh session of the Albany Medical College, September 24, 1907. Criticises the tendency toward absolute control of the practice of medicine by State licensing boards, and indicates some of the present tendencies in medical education which call for restraint.

278. **Williams, W. R.** The teaching of medicine. (Educ. rev. Dec., 34: 466-77.)

Traces the growth of instruction, beginning with the methods in ancient Greece. Deals with American conditions, showing the present tendency to increase opportunities for gaining practical knowledge.

375.63. AGRICULTURAL EDUCATION.

See also papers printed in the N. E. A. Proc. pp. 1063-1084, under the conference of national committee on agricultural education.

279. **Association of American agricultural colleges and experiment stations.** Proceedings of the twentieth annual convention held at Baton Rouge, La., Nov. 14-16, 1906, and twenty-first annual convention held at Lansing, Mich., May 28-30, 1907. O. (U. S.—Experiment stations, Office of, Bulletins 184, 196.)

280. **Channing, F. A.** What agricultural education means to-day. (Fortn. rev. May, 87: 785-97.)

Deals with conditions in England. Shows that the most urgent need is rural secondary schools.

281. **Crosby, D. J.** Exercises in elementary agriculture—Plant production. 64 p. O. Government printing office. (Office of experiment stations. Bulletin 186.)

A laboratory guide for teachers, showing what may be done with simple exercises and inexpensive apparatus.

282. **Davis, C. W.** Rural school agriculture. 300 p. D. Orange Judd co., \$1.

283. **Hes, George.** Dr. Robertson's work for the training of Canadian farmers. (Rev. of Rev. Nov., 36: 576-84.)

284. **Jewell, J. R.** Agricultural education, including nature study and school gardens. 140 p. O. Government printing office. (U. S.—Education Bureau. Bulletin 2, 1907.)

"Presents an unusually comprehensive survey of the provisions for agricultural education and for instruction in closely related lines in various parts of the world, but with especial reference to the United States."

285. **Latter, L. R.** School gardening for little children. 167 p. D. Sonnenscheln, 2s. 6d.

Aims to show the place of nature teaching in kindergartens and schools and the method by which the subject should be approached with young children. Originally printed in *The Practical Teacher*.

286. **Medd, J. C.** Agricultural education in the United Kingdom. (Nineteenth cent. Jan., 61:108-18.)

Shows the need of national supervision of agricultural education and offers suggestions for improving the present teaching of the subject.

287. ——— *The Village school.* (Nineteenth cent. Nov., 62:758-60.)

Elementary agricultural education and school gardens in England.

288. **N. Y. (state)—Education department.** Syllabus for secondary schools; Agriculture. 37 p. O. Albany, no price.

Outline of a 3-period course for one year, preferably in the second year of high school. Reference books are suggested and many laboratory exercises described.

289. **Roosevelt, Theodore.** The man who works with his hands; address at the semi-centennial of the founding of agricultural colleges in the United States at Lansing, Mich., May 31, 1907. 14 p. O. (U. S. Dept. of Agriculture. Circular 24.)

290. **Somerville, William.** (The) place of rural economy in a university curriculum; an inaugural lecture delivered at the schools on February 1, 1907. 28 p. O. Clarendon Press, 35c.

Mr. Somerville is the present Sibthorpe professor of rural economy at Oxford. A review of the creation and development of higher agricultural education in England, and a sketch of possible further developments in it as a subject of instruction and research at Oxford.

291. **The teaching of agriculture in the schools of France and Belgium.** (U. S.—Education, Comm'r of. Report for 1905. 1:87-96.)

Gives outlines of courses in schools of all grades and compares the work in France and England.

292. **Tormay, Béla de.** Agricultural instruction in the kingdom of Hungary. (N. E. A. 50th anniv. vol. p. 445-451.)

293. **Watkins, W. E., and Lowman, A.** School gardening. 103 p. D. Philip, 2s. 6d.

375.64. DOMESTIC SCIENCE.

294. **Creighton, Louise.** Some modern ideas about women's education. (Nineteenth cent. Oct., 62:578-86.)

Discusses the proper scope for the teaching of domestic economy in the schools of England. Believes "there is ground for fear that the higher side of women's education will not be sufficiently taken into account by the education authorities and that utilitarian considerations will be allowed too much scope." Also in *Littell's Living Age*, 255:408-16.

Mainly a protest against what the author would call the new craze of teaching domestic science to girls. She questions whether there is any scientific basis for such teaching.

295. **Great Britain—Education, Board of.** School training for the home duties of women. Part 3. 121 p. O. (Special reports on educational subjects. v. 19.)

The domestic training of girls in Germany and Austria in elementary, secondary, technical, and continuation schools.

375.65. COMMERCIAL EDUCATION.

See also papers printed in N. E. A. Proc., pp. 877–903, under the department of business education.

296. **Heelis, F.** How to teach business training. 156 p. D. Pitman and sons, 2s. 6d.

A guide for the commercial master in day and evening schools.

297. **Jastrow, Joseph.** Higher education for business men in the United States and Germany. (U. S.—Education, Comm'r of. Report for 1905. 1: 97–110.)

Translated from Berliner Jahrbuch für Handel und Industrie, 1904, volume 1. The author was sent by the Berlin chamber of commerce to study American methods of preparing young men for business.

298. **Social education quarterly.** June, 1907. 97 p. O.

Contains the following papers: Domestic and international commerce, by W. P. Wilson. The social improvement of grammar school graduates in business life, by E. A. Ellene. The effect upon the community consequent upon the thorough training of young women to enter business life, by Henry Lefavour. The functions of the university in commercial education, by J. T. Young.

375.7. ART EDUCATION.

See also papers printed in the N. E. A. Proc., pp. 821–848, under the department of art education, and the files of The School Arts Book.

299. **American institute of architects.** Committee on education. Report at Chicago, Nov. 19, 1907. 9 p. O.

300. **Cram, R. A.** Architectural education in the United States. (In his Gothic quest. Baker and Taylor, \$1.50. p. 323–55.)

Especially during the last decade.

301. **Ives, H. C.** Art education an important factor in industrial development. (U. S.—Education, Comm'r of. Report for 1905. 1: 155–83.)

375.78. MUSICAL EDUCATION.

See also papers printed in the N. E. A. Proc., pp. 849–876, under the department of music education.

302. **Johnson, C. E.** (The) training of boys' voices. 60 p. O. Oliver Ditson Co., 75c.

Author is a choirmaster. One chapter is on "Music in schools," and following the one on "Selection of music for boys' voices" there are lists of sacred and secular music suited to boys' voices.

375.82. ENGLISH LANGUAGE AND LITERATURE IN THE CURRICULUM.

See also Nos. 411, 414.

303. **Baker, G. P.** Travelers' English. (Educ. Apr., 27: 448–57.)

Criticises the careless, everyday English of the average undergraduate. Pleads for simple, accurate English. Believes the prevalent inaccurate English of students could be avoided if each school required that the English of its pupils in translations from French, German, Latin, or Greek, and reports and exercises of all kinds should be regarded in assigning the mark for the course in question. In an article on pp. 458–466 Doctor Thorndike points out the bearing of psychology on the question of securing accuracy by formal methods.

304. **Course of study in English.** The call for it, the character of it and the construction of it. Report of the New England ass'n of teachers of English. (School rev. Oct., 15:559-75.)

Concludes that a syllabus in English is needed; that it should be catholic enough to exercise a steady and unifying influence over a wide area.

305. **Greenwood, J. M.** Language teaching. (Educ. rev. June, 34:26-36.)

From report of city superintendent of schools, Kansas City, Mo. Full of practical suggestions. Believes best results are reached when pupils are so taught that instruction leads them to consecutive thought in expressing themselves in writing and conversation.

306. **Hartog, P. J., and Langdon, A. H.** The writing of English. 176 p. D. Frowde, 2s. 6d.

Text of this book is "The English boy cannot write English;" the author points out the almost total lack of effective language training in English schools, and compares it with mother-tongue teaching in France, greatly to the credit of the latter. This book is a distinct contribution to history of style.

307. **Logan, J. D.** Quantitative punctuation; a new practical method based on the evolution of the literary sentence in modern English prose. 45 p. D. William Briggs, Toronto, 50c.

308. **MacClintock, P. L.** Literature in the elementary school. 305 p. D. Univ. of Chicago Press, \$1.

This book, the central matter of which appeared in *Elementary School Teacher* in 1902 and a synopsis in 1904, is the fruit of several years' experience in teaching literature in Prof. John Dewey's laboratory school at the University of Chicago. The book lays special stress on care in choosing material and in viva voce presentation.

309. **Mahy, M. C.** Aesthetic appreciation of literature in secondary education. (School rev. Dec., 15:731-43.)

A protest against the statement that no secondary teacher can hope for more than intellectual appreciation of the masterpieces of literature on the part of pupils.

310. **Robertson, S. A.** The teaching of English in schools which study no foreign language. (Jour. of educ. (Lond.) Apr., n. s. 28:286-90.)

311. **Spaulding, F. E., and Bryce, C. T.** Learning to read; a manual for teachers. 219 p. D. Newson & Co., 60c.

Chapter 1 explains the method, which lays special stress on phonetics; chapter 2 describes books, charts, and other materials, chief among which are phonic and rhyme charts; chapters 3 and 4 describe in detail the application of the method.

312. **Tanner, G. W.** Report of the committee appointed by the English conference to inquire into the teaching of English in the high schools of the middle west. (School rev. Jan., 15:32-45.)

Scope of inquiry included the attitude of the high school teacher toward the college-entrance requirements, and outside or home reading of pupils. Tabulates answers to a questionnaire sent 67 schools on the conference list. Summing up the objections and commendations it is shown that a broadening of the college-entrance requirements is what is needed to meet the various conditions in different schools and the different personalities of the teachers.

313. **Trueblood, T. C.** Forensic training in college. (Educ. Mar., 27:381-92.)

Author is professor of elocution and oratory in University of Michigan. Describes college courses in elocution, oratory, and debating. Shows the opportunities offered for public work and the benefits derived by students. Lays special stress upon the value of intercollegiate debates, and mentions several of the leagues and systems in vogue.

375.84. MODERN LANGUAGES IN THE CURRICULUM.

314. **Benson, A. C.** The place of modern languages in the secondary curriculum. (*Jour. of educ. (Lond.)* Feb., n. s. 28: 117-21.)

President's address at annual conference of the Modern Language Association at Durham, January 4, 1907.

Urges reform in linguistic training, and condemns the old theory of the value of classical education as no longer practical. Claims that for the average boy a single modern language, preferably French, should be made the basis of linguistic instruction.

315. **Brereton, Cloudesley.** *Idola pulpitum*: the pitfalls of the practical teacher—French. (*Jour. of educ. (Lond.)* Feb.-Mar., n. s. 28: 109-11 and 179-81.)

Accent, grammar, translation, composition, choice of books, etc.

316. ———. The teaching of modern languages in England. (*N. E. A. 50th anniv. vol.* p. 366-377.)

French should be the first modern language studied, and it may profitably be begun at nine or earlier.

317. **Grandgent, C. H.** Is modern language teaching a failure? (*School rev.* Sept., 15: 513-34.)

Address before joint session of the classical and modern language conferences at Ann Arbor, March, 1907. States that the present instruction is still vastly inferior to that of the classics, and as the modern tongues to a considerable extent have replaced Greek and Latin in the secondary school curriculum and in the ordinary college training, no instruction in them can be regarded as satisfactory which does not produce results comparable to those derived from the study of the old humanities. Seeks to discover the obstacles that have up to this time prevented success.

318. **Lawton, W: C.** A Hellenist's view of Italian. (*Educ. rev.* June, 34: 37-46.)

Italian is more suitable, more practical, and more illuminating than French as the first stage toward the serious scholastic mastery of romance languages and literature. It should be widely if not generally taught in secondary schools, and be pushed vigorously to the front in every college.

319. **Why should the teacher of German have a knowledge of phonetics?** Symposium by A. C. von Noé, Edith Clawson, Paul O. Kern. (*School rev.* Jan., 15: 46-60.)

375.88. THE CLASSICS IN THE CURRICULUM.

For further material as to the place and value of Latin and Greek in the school programme, consult the files of *The Classical Journal*.

320. **Adams, C. F.** A college fetich. (In his *Three phi beta kappa addresses.*) (Houghton, \$1. p. 5-48.)

Although delivered and printed twenty-five years ago, this address, denouncing the way in which college Greek is taught and questioning the use of compulsory teaching of it at all, is still pertinent and worth notice here.

321. **Kelsey, F. W.** The position of Latin and Greek in American universities. (*Educ. rev.* Jan.-Feb., 33: 59-76, 162-76.)

Continuing article in same review for December, 1906; these installments discuss the value of the classics as educational instruments and the inadequate amount of time accorded them in the curricula of our secondary and higher schools. Professor Kelsey's papers are, of course, special pleading, and are in turn discussed by Irving King in same review for May, 1907, who shows that some of the common arguments used in support of classical studies are open to serious question, but believes they will continue to have a very definite

and permanent place in modern civilization, and in the final readjustment will occupy no less dignified position than they do to-day, for they will have definitely allied themselves with modern life and modern needs.

322. **Page, T. E.** Classical studies. (Educ. rev. Sept., 34: 144-50.)

Considers the change in the position of classical studies in the English public schools during the last fifty years. Shows that the danger of sacrificing and difficulty of retaining are equally clear, and that means for avoiding both is the chief problem of the public school of to-day. Reprinted from the London Times.

323. **Paulsen, Friedrich.** Humanistic vs. realistic education. (Educ. rev. Jan., 33: 36-45.)

Translation of a chapter in *Lexis: Die Reform des höhern Schulwesens in Preussen*. Contrasts the value of classical and that of scientific education, with special reference to the schools of Germany.

324. **Rouse, W. H. D., ed.** (The) year's work in classical studies, 1906. 140 p. O. Murray, 2s. 6d.

The first number of a new annual under the auspices of the Classical Association, designed to inform teachers of classical subjects of important progress throughout the world.

325. **Symposium on the value of humanistic, particularly classical, studies as a preparation for the study of law, from the point of view of the profession.** (School rev. June, 15: 400-35.)

375.9. HISTORY IN THE CURRICULUM.

326. **Cauchie, Alfred.** The teaching of history at Louvain. (Catholic univ. bulletin, Oct., 13: 515-61.)

Descriptive sketch of the practical and theoretical courses in the historical department of Louvain University.

327. **Larned, J. N.** The peace-teaching of history. (Jour. of social science, no. 45: 175-88.)

The staple of history has always been war. That should be less emphasized and different social lessons drawn from it.

375.91. GEOGRAPHY IN THE CURRICULUM.

The Journal of Geography, New York, and the Geographical Teacher, London, are especially devoted to the interests of teachers of geography.

328. **Gibbs, David.** The pedagogy of geography. (Ped. sem. Mar., 14: 39-100.)

Includes an historical review of text-books and methods of teaching the subject in elementary and higher schools in Europe and the United States. Outlines an elementary course.

376. EDUCATION OF WOMEN.

See also Nos. 27, 295.

329. **Beale, Dorothea.** Secondary education of girls in England during the past fifty years. (N. E. A. 50th anniv. vol. p. 377-86.)

330. **Burstall, S. A.** English high schools for girls: their aims, organization and management. 243 p. D. Longmans, \$1.25.

Author is head mistress of the Manchester high school for girls. The book sketches the characteristic aims, organization, and methods of the English high school for girls as it exists to-day.

331. **Creighton, Louise.** Some modern ideas about women's education. (Nineteenth cent. Oct., 62: 578-86.)

Discusses the proper scope for the teaching of domestic economy in the schools of England. Believes "there is ground for fear that the higher side of women's education will not be sufficiently taken into account by the education authorities and that utilitarian considerations will be allowed too much scope." Also in *Littell's Living Age*, 255: 408-16.

332. **Girls' school year book; public schools, 1907.** 515 p. D. Sonnenschein, 2a. 6d.

Second year. A concise, comprehensive record of all matters of interest to parents, school mistresses, and girls in connection with English secondary education.

333. **Howe, E. M.** The southern girl: a neglected asset. (*Educ. rev. Mar.*, 33: 288-97.)

States that the supreme need of the South is the better education of the southern girl, and suggests its accomplishment by: (1) Good secondary schools, adequately endowed; (2) establishment of scholarships in northern colleges for southern girls; (3) generous increase in the endowment of their best home colleges.

334. **Marshall, F. M.** Industrial training for women. 59 p. O. (*Nat. soc. for the promotion of industrial education. Bulletin 4.*)

Discusses the changed position of women in industry, their opportunities for effective work, and some practical schemes for their training in particular trades. See also Nos. 256, 260, 295, above.

335. **Paine, H. E.** The life of Eliza Baylies Wheaton: a chapter in the history of the higher education of women, prepared for the alumnae of Wheaton Seminary. 286 p. O. \$1.25.

336. **Paulsen, Friedrich.** The modern system of higher education for women in Prussia. (*N. E. A. 50th anniv. vol.* p. 395-408.)

337. **Sée, Camille.** The secondary education of girls in France. (*N. E. A. 50th anniv. vol.* p. 386-95.)

338. **Shields, T. E.** The education of our girls. 209 p. D. Benziger, \$1.

The pronoun in the title means Roman Catholic. Under a slender thread of story and dialogue the author brings forward typical views on both sides of the question of coeducation. The conclusion reached is plainly in favor of the higher education of women, but not under coeducational conditions.

376.7. COEDUCATION.

339. **Sachs, Julius.** Co-education in the United States. (*Educ. rev. Mar.*, 33: 298-305.)

Claims that its disadvantages outweigh its advantages. While thoroughly in place in elementary schools, it is of doubtful value in secondary schools and colleges. Predicts a change in the general attitude toward the question. Translated by the author from the German in *Die Wissenschaften*, June, 1906.

340. **Van Hise, C. R.** Educational tendencies in state universities. (*Educ. rev.* 34: 504-20.)

This paper is devoted especially to the problem of coeducation, showing that the natural segregation of the sexes is an educational tendency which must be provided for, otherwise coeducation will be weakened.

337. RELIGIOUS AND MORAL EDUCATION.

341. **Archibald, E. J.** (The) primary department. 91 p. D. Sunday school times, 50c.

342. Cabot, E. L. An experiment in the teaching of ethics. (Educ. rev. Dec., 34: 433-47.)

Author is a teacher of twelve years' experience in a girls' school, who believes the study of ethics can be made as outgoing, enlarging, and free from false self-reference as the study of history or literature.

343. Coe, G. A. The reason and the functions of general religious education. (Congress of arts and sciences. Houghton. v. 8, p. 271-81.)

344. Cope, H. F. The modern Sunday school in principle and practice. 206 p. D. Revell, \$1.

Historical and administrative rather than pedagogical. Twenty short chapters on different phases of Sunday-school work. Brief, but full of suggestions. The author is general secretary of the Religious Education Association.

345. Du Bois, Patterson. The culture of justice; a mode of moral education and of social reform. 282 p. S. Dodd, Mead, 75c.

An argument that neither love nor justice alone, but love and justice are the fundamental moral and social principles. The book elaborates this theory in its first half; in the concluding chapters it treats of specific applications to the training of children, and considers obedience, punishment, and money as means of moral training. Parents and teachers will find here a restatement of some old ideals.

346. Ellis, Havelock. Religion and the child. (Nineteenth cent. May, 61: 764-75.)

Characteristics of the child mind have not been taken into account in dealing with the religious instruction problem. "In the wrangle over teaching of religion in schools we have failed to realize that fundamental notions of morality are a far more essential part of school training."

347. Hart, M. A. The normal training of the child. 55 p. S. Christian pub. co., 25c.

Earnest paragraphs on preparation for, method and content of, religious instruction.

348. Hervey, W. L. How may the teaching of religion be made potent for morality. (Congress of arts and sciences. Houghton. v. 8, p. 282-93.)

349. Lodge, Oliver. Religious education of children. (No. Amer. rev. Aug., 185: 699-710.)

Discusses proper scope of, and materials for, imparting religious instruction to the young. Also in Contemp. Review, Aug., 92: 153-64.

350. Moral training in the public schools; the California prize essays. 203 p. D. Ginn, \$1.50.

Essays by C. E. Rugh, T. P. Stevenson, E. D. Starbuck, Frank Cramer, G. E. Myers. The traditional American policy of a secular school system and present American conditions are assumed by each writer as a basis. Mr. Stevenson's essay describes several of the strongest plans which have been urged for grafting formal religious or moral instruction on our public school system.

351. Religious education association. The materials of religious education; being the principal papers presented at, and the proceedings of the fourth general convention, Rochester, N. Y., Feb. 5-7, 1907. 379 p. O. Rel. educ. assoc., 153 La Salle st., Chicago, \$2.

Over 40 brief papers, most of them by writers whose names challenge attention. The most important are on the large social phases of moral and religious ideals and the efforts to attain them through formal education.

352. **Rogers, C. F.** The education question : foreign parallels. (Church quar. rev. Oct., 65:1-17.)

How the religious question is handled in other European countries.

353. **Sisson, E. O.** The spirit and value of Prussian religious instruction. (Amer. jour. of theol. Apr., 11:250-68.)

Religious instruction is regarded in Prussia as an indispensable element in any complete school course, but in its present form it stands in need of radical and extensive reform.

354. **Stebbins, F. V.** (The) home department of to-day. 128 p. D. Sunday school times, 25c.

Full of practical suggestions for the conduct of this rather new phase of Sunday-school work.

355. **Wenner, G. U.** Religious education and the public school; an American problem. 163 p. D. Bonnell, Silver, 75c.

Urging the public school authorities of the country to unite in giving up Wednesday afternoon to permit children to attend formal religious instruction in their own churches. This plan is discussed by S. P. Delany in *Education* for May, 1907, 28:97-112.

356. **Wilde, Norman.** The psychology of religion and education. (Educ. rev. Sept., 34:180-95.)

The problem of religious education is not how to add religion to a nature devoid of it, but how to develop religion in a life already disposed to it. Formal instruction in religion in advance of the child's need and interests is useless.

378. HIGHER EDUCATION: COLLEGES AND UNIVERSITIES.

357. **Eliot, C. W.** Academic freedom. An address delivered before the Phi beta kappa society at Cornell university, May 29, 1907. 24 p. O. Andrus & Church, Ithaca, N. Y.

Also in *Science*, 5 July, 1907, n. s. 26:1-12, and in *Journal of Pedagogy*, Sept.-Dec. 1907, 20:9-28.

358. **Jordan, D. S.** College and the man. 78 p. D. Amer. Unitarian Ass'n, 80c.

Paragraphs addressed to high school students or those in college, presenting the advantages of a college education.

359. **Person, H. S.** The college graduate in trade and industry. (Educ. June, 27:589-600.)

Shows that the changes in the business world have created a demand for new qualifications in young men entering it. While acknowledging that the success of a college man relative to a noncollege man will depend upon the nature of the business undertaken, the conclusion is that of young men endowed with a natural capacity for business, the college trained advance more rapidly to positions of responsibility than those who enter business from the high school. Cites as proof, the development of schools for higher commercial education.

360. **Sadler, S. H.** The higher education of the young; its social, domestic and religious aspects. Ed. 2. 276 p. D. Dutton, 3s. 6d.

361. **Vanderlip, F. A.** Co-ordination of higher education. (In his *Business and education*. Duffield, \$1.50. p. 1-19.)

Founder's day address, Girard College, May 20, 1905. Argues that the men who make great educational gifts might with much profit be more consulted as to using the money, because the qualities which enable a man to get a million dollars and which move him to give it make him a good adviser.

Canada.

362. **Lord, W. F.** Degree-granting institutions in Canada. (Nineteenth cent. Aug., 62: 262-71.)

Laval, McGill, Queens, University of Toronto.

France.

363. **Calvet, J.** Catholic university education in France. (Catholic univ. bulletin, Apr., 13: 191-210.)

Describes the distinctive features of the free Catholic universities at Paris, Lille, Angers, Lyon, and Toulouse, with a résumé of the results accomplished during the thirty years of their existence.

364. **Du Poney, Robert.** Americans in French universities. (University of California chronicle, Oct., 9: 335-53.)

Gives the American contemplating study at French universities the practical information which will save him time and money.

365. **Wendell, Barrett.** Impressions of contemporary France. Universities. (Scrib. mag. Mar., 41: 314-26.)

Great Britain.

366. **Headlam, A. C.** Universities and the empire. A paper read at the Imperial conference on education, May, 1907. 24 p. D. Spottiswoode, 6d.

The part they may play and how it may be done.

367. **Irish university question.** (Quarterly rev. Apr., 206: 536-46.)

Comments on the Report of the Royal Commission on Trinity College, Dublin, and the University of Dublin, 1906.

368. **Jackson, W: W.** Some problems of university reform. (Fortn. rev. Oct., 88: 562-74.)

A partial review of some recent expressions of opinion which appeared as a series of letters in the London Times under the title "Oxford and the nation," and comments upon the speech of the Bishop of Birmingham, addressed to the House of Lords, in favor of the appointment of a commission to deal with the universities. A. E. Zimmern replies on several points in same review for November, 1907, 88: 744-53.

369. **Aberdeen. Aberdeen university.** Record of the celebration of the quarter-centenary, Sept. 25-28, 1906. 656 p. Q. The Univ. of Aberdeen press. (Aberdeen univ. studies, no. 29.)

370. **Cambridge. Fay, C. R.** King's College, Cambridge. 128 p. D. Dutton, 75c. (College monographs, 3.)

Much more space is given to the architecture and grounds than in other volumes of this series.

371. ——— **Scott, R. F.** St. John's College, Cambridge. 111 p. D. Dutton, 75c. (College monographs, 2.)

Two chapters of "guide-book" matter are followed by a brief history of the college, with a final chapter on its social life.

372. **Durham. The future of the university of Durham.** (Church quar. rev. July, 64: 257-76.)

373. **London. Record of the visit of the University of Paris to the University of London, Whitsuntide, 1906.** Murray, 5s.

374. *Oxford*. Lawson, W. R. Oxford finance. (Contemp. rev. Nov., 92: 622-36.)

An argument against the proposed increased endowment for Oxford University. Charges laxity in the present financial management and includes tables which show that an education at Oxford is more expensive than at German or Scottish universities.

375. ——— Marriott, J. A. Oxford and the nation. (Nineteenth cent. Oct., 62: 874-88.)

Indicates some of the leading reforms which have been the outgrowth of the commission of 1850, and discusses specific suggestions for further reform which would render Oxford more serviceable.

376. ——— Oxford and the nation, by some Oxford tutors. London Times, 1a.
A reprint of some notable "Times" letters as to the present and future of Oxford University.

377. ——— Prickard, A. O. New College, Oxford. 99 p. D. Dutton, 75c.
(College monographs, 5.)

378. ——— Scholz, R. F., and Hornbeck, S. K. Oxford and the Rhodes scholarships. 172 p. D. Oxford univ. press, 85c.

Contains the Rhodes will, methods through which it has been carried out, such information about Oxford as a Rhodes scholar is presumed to want, list of Rhodes scholars, copies of examination papers, and much other similar matter. More particular information, of interest especially to candidates from the United States, is found in the Report of the U. S. Commissioner of Education for 1905, volume 1, p. 41-55.

379. ——— Warren, T. H. Magdalen College, Oxford. 135 p. D. Dutton, 75c.
(College monographs, 4.)

A brief popularization of the work of Bloxam, Macray, and H. A. Wilson. Unlike the other volumes in this series, this one is wholly historical and not of the "handbook" character.

380. ——— White, H. J. Merton College, Oxford. 104 p. D. Dutton, 75c.
(College monographs, 6.)

A short popular handbook of the college, with a brief prefatory, historical chapter. 14 illustrations.

United States.

Full statistical data for American colleges and universities are in the Report of the U. S. Commissioner of Education for 1906, 1: 445-592.

381. Adams, C. F. Three phi beta kappa addresses: A college fetish, 1883; "Shall Cromwell have a statue?" 1902; Some modern college tendencies, 1906. 200 p. O. Houghton, \$1.

This collection of pieces contains, besides the three addresses noted on the title-page, "The journeyman's retrospect," "The Harvard tuition fee," and "The fiftieth year 1856-1906."

382. Adams, G. B. The college in the University. (Educ. rev. Feb., 33: 121-44.)
Historical sketch of the development of the curriculum for higher education in America.

383. Bascom, John. American higher education. (Educ. rev. Sept., 34: 130-43.)

Contrasts college curriculum and life of the present with conditions sixty years ago. States that higher education has caught an artificial haste from the commercial world and its gains have been sporadic. More blame than praise is given to the elective system, fraternity life, and athletics.

384. **Birdseye, C. F.** Individual training in our colleges. 484 p. O. Macmillan, \$1.75.

A portrayal of present American college conditions, which indicates the almost complete disappearance of rugged individual training, development of character, and wholesome, effective intellectual cultivation. The book shows how these conditions have arisen from or have accompanied the brick, mortar, and endowment stage of our university growth, with its enormous numerical increase of students. The author makes some very definite suggestions for betterment, chief of which is the enthusiastic development of the possibilities before the Greek letter fraternities, through their alumni, in supplying the individual training available through no other college institution.

385. **Canfield, J. H.** On "The decay of academic courage." (Educ. rev. Jan., 33: 1-10.)

A protest against the too prevalent criticism of the leaders of educational supervision and administration, illustrated by discussion of present powers and duties of the American college president.

386. **Carpenter, W: H.** A plea for a rational terminology. (Educ. rev. Oct., 34: 259-71.)

Recommends a stricter distinction between the names "college" and "university."

387. **Draper, A. S.** American type of university. (Science, July 12, n. s. 26: 33-43.)

Address delivered at the commencement of Syracuse University, June, 1907. Discusses the distinguishing features of the new type of American university which has developed during the last fifty years.

388. **Foster, W: T.** The gentleman's grade. (Educ. rev. Apr., 33: 386-92.)

Deals with the standard of daily college work. Believes that the fairest and most potent way in which to stimulate students is to count quality as well as quantity toward the A. B. degree.

389. **Lowell, A. L.** American universities. (Science, 28 June, n. s. 25: 985-96.)

Annual Harvard address at Yale, April, 1907. Discusses the distribution of students and gives statistics to show that endowed universities are doing a more fully national work than those supported by the State. Suggests plans for effective grouping of students.

390. **The responsibility of the college for the moral conduct of the student.** (In Association of colleges and preparatory schools of the middle states and Maryland. Proc. of twentieth annual convention, 1906. p. 93-125.)

Papers by J. H. Harris, J. M. Taylor, J. H. Dembigh.

391. **Salmon, L. M.** The encroachments of the secondary schools on the college curriculum. (In Association of colleges and preparatory schools of the middle states and Maryland. Proc. of twentieth annual convention, 1906. p. 56-63.)

392. **Snow, L. F.** The college curriculum in the United States. 186 p. O. Columbia Univ. \$1.50. (Teachers coll. cont. to educ. no. 10.)

An historical study of the growth and development of the college curriculum from 1638 to the present time, based principally on what are termed the five formal documents, namely: President Dunster's Laws, 1642; Provost Smith's Programme, 1756; Report of the Yale faculty, 1828; Report of Committee of Ten, 1892; Incorporation of Carnegie Institution, 1902.

393. **Tombo, Rudolf.** Geographical distribution of the student body at a number of universities and colleges. (Science, 26 July, n. s. 26: 97-104.)

Seventeen institutions are now represented in these interesting annual tables.

394. **Tombo, Rudolf.** University registration statistics. (Science, 29 Nov., n. s. 26: 729-44.)

395. **Wenley, R. M.** Transition or what? (Educ. rev. May, 33: 433-51.) Can we stem the tide? (Educ. rev. Oct., 34: 241-58.)

The first paper makes observations on the text, "Whither are our dropsical and anemic universities tending?" The second maintains that unwise pressure of public opinion from without, on our universities, is more to be feared than the fancied internal jarring of the machinery which so often is made the subject of "reforms."

396. **West, A. F.** American liberal education. 135 p. D. Scribner, 75c.

Six papers and addresses on topics pertaining to our higher education. All have appeared in print between 1900 and 1906 and have been noted in previous annual issues of this bibliography in the Educational Review.

397. *Cincinnati university.* **Prentiss, H. W. Jr.** Cincinnati university. (Ohio magazine, Jan., 2: 43-53.)

A popular account, with numerous pictures of buildings.

398. *College of the city of N. Y.* **Mosenthal, P. J., and Horne, C. F., editors.** The City college; memories of sixty years edited for the associate alumni of the College of the City of New York. 565 p. Q. Putnam, \$5.

A sumptuous memorial volume, made up of brief chapters on various phases of college history and life by former students, many of them now men of distinction.

399. *Denison university. Memorial volume of Denison university, 1831-1906.* Part I. The development of the college. Part II. Seventh general catalogue. 286 p. O. Pub. by the University, \$1.

400. *Illinois state normal university. Semi-centennial history, 1857-1907;* prepared under the direction of a committee of the faculty. 384 p. O. The Univ. Normal, Ill., \$1.22.

401. *Leland Stanford university.* **Alden, R. M.** College authority. (Nation, 4 July, 85: 12-13.)

An account of the new (since 1904) form of internal university government at Leland Stanford Jr. University.

402. *Maryland university.* **Cordell, E. F.** University of Maryland, 1807-1907, its history, influence, equipment and characteristics, with biographical sketches and portraits of its founders, benefactors, regents, faculty and alumni. 2 v. Q. Lewis pub. co.

403. *North Carolina university.* **Battle, K. P.** History of the University of North Carolina from . . . 1789 to 1868. 880 p. O. Edwards & Broughton co., Raleigh, \$3.

A second volume is promised, bringing the history to date.

404. *Otterbein.* **Garst, Henry.** Otterbein university, 1847-1907. 316 p. D. United Brethren pub. house, Dayton, O., 75c.

405. *Union university.* **Raymond, A. V. V.** Union university; its history, influence, characteristics and equipment, with the lives and works of its founders, benefactors, officers, regents, faculty and the achievements of its alumni. 3 v. O. Lewis pub. co. N. Y., \$30.

Volume 1 contains the history, not only of Union College proper, but of Albany Medical College, Albany Law School, Dudley Observatory, and Albany College of Pharmacy, now all parts of Union University. The last two volumes are biographical. See also No. 34 above.

406. *Wesleyan university. Celebration of the seventy-fifth anniversary of the founding of Wesleyan university 1831-1906.* 216 p. O. Wesleyan univ., \$1.

Contains the addresses, programme of the exercises, many portraits of faculty and buildings, and much incidental historical material.

407. *Yale university. Dexter, F. B. Biographical sketches of the graduates of Yale college with annals of the college history; vol. 4, 1778-1792.* 752 p. Q. Holt, \$5.

It is twenty-two years since volume 1 appeared, and the author in his preface to the present volume speaks doubtfully of its continuation.

378.01. COLLEGE ENTRANCE REQUIREMENTS.

408. *Bruce, M. S. College entrance requirements in French.* (Educ. rev. Apr., 33: 406-13.)

Finds little to criticise with respect to the written examinations now set by the majority of the colleges, but suggests that additional oral requirements be made.

409. *College entrance examination board. Seventh annual report of the secretary.* (Educ. rev. Oct., 34: 272-316.)

410. *Davis, N. F. Is the present method of granting certificate-rights to preparatory schools satisfactory?* (School rev. Feb., 15: 145-52.)

Author is secretary of New England college entrance certificate board. He describes its methods and answers some of the chief complaints.

411. *Greenough, C. N., and others. A report on the examinations in English for admission to Harvard college. June 1906.* 41 p. O. Harvard univ. 15c.

"Several years' experience in reading English entrance examination books has impressed upon us the regularity with which candidates repeat certain elementary errors. To put into the hands of teachers a large number of these errors and to make some suggestions for preventing them are the objects of this report." *Preface.*

A review in the Educational Review, June, 1907, says that the Harvard examiners place far too much stress on the technicalities of punctuation, spelling, and capitalization, and are in other ways so narrow and dogmatic in methods of marking as to overlook true proportion and values. The reviewer cites Barrett Wendell in support of his argument.

412. *National society for the scientific study of education. Vocational studies for college entrance.* 79 p. O. (Yearbook 6, pt. 1.)

Papers on the history, policy, and possibility of the suggestion, by C. A. Herrick, H. W. Holmes, T. de Laguna, V. Prettyman, and W. J. S. Bryan.

413. *Rollins, Frank. Syllabuses and examinations in physics.* (Educ. rev. Nov., 34: 347-64.)

Paper read before the Schoolmasters' Association of New York and Vicinity, 1906. Author is principal of the Stuyvesant High School, New York City. Compares the syllabuses of the college entrance examination board, New York State education department, and the N. E. A., and prints entrance examination papers from Yale, Harvard, Princeton, Columbia, and the college entrance board.

414. *Tanner, G. W. Report of the committee appointed by the English conference to inquire into the teaching of English in the high schools of the middle west.* (School rev. Jan., 15: 32-45.)

415. **Wight, J. G.** Should college entrance requirements be reduced in quantity? (In Association of colleges and preparatory schools of the middle states and Maryland. Proc. of twentieth annual convention, 1906. p. 45-56.)

Argues for the affirmative.

416. **Young, W. H.** The high schools of New England as judged by the standard of the college certificate board. (School rev. Feb., 15: 134-44.)

378.2. ACADEMIC DEGREES.

417. **Carpenter, W. H.** The utility of the Ph. D. degree. (Educ. rev. June, 34: 1-12.)

Considers many of the recent criticisms as unjust, and presents in a clear fashion the status of the Ph. D. degree in America, showing that it is the man who bears the degree and not the degree he bears that is the end of education.

418. **Doctorates conferred by American universities.** (Science, 30 Aug., n. s. 26: 276-82.)

Analysis of the statistics of the doctorate degree conferred by nineteen American universities during the past ten years.

419. **Fletcher, J. B.** Teachers of literature and the Ph. D. (Educ. rev. Sept., 34: 175-79.)

Believes that the highest academic degree in course should not be administered as a "teacher's degree," but as a "scholar's degree." Suggests that the M. A. be extended to meet the teacher's need, and that it be made the "teacher's degree."

378.3. GRADUATE WORK: RESEARCH.

420. **Comstock, G. C.** The appointment and obligations of university fellows. (In Association of American universities. Journal of proceedings and addresses of eighth annual conference, 1907. p. 39-44.)

421. **Hall, G. S.** The appointment and obligations of graduate fellows. (In Association of American universities. Journal of proceedings and addresses of the eighth annual conference, 1907. p. 16-38.)

Chiefly devoted to statistics of number, subjects, income, and conditions as to tenure and work.

379. PUBLIC SECONDARY EDUCATION: THE STATE AND EDUCATION.

422. **Judson, H. P.** Education by the state and for the state. (In Conference for education in the south. Proceedings of tenth conference, 1907. p. 46-56.)

Discussion by F. W. Hinitt, pp. 57-62.

379.11. SCHOOL FINANCE: TAXATION.

423. **Elliott, C. W.** The exemption of educational institutions from taxation. (In Association of American universities. Journal of proceedings and addresses of eighth annual conference, 1907. p. 48-49, and Appendix, p. 107-11.)

Anent the recent attempt in Massachusetts to tax property of Harvard University.

424. **Page, T. W.** The exemption of educational institutions from taxation. (In Association of American universities. Journal of proceedings and addresses of eighth annual conference, 1907. p. 49-56.)

425. Public-school finance: what next? (In N. E. A. Proc. p. 343-60.)

Includes papers by J. D. Burks and ex-Governor G. C. Pardee, which discuss the need and value of some general and definite administrative standards in the present methods of the distribution of State funds.

379.14. SCHOOL LAWS.**426. Legislation relating to education enacted by the fifty-ninth congress, 1905-7.** (U. S.—Education, Comm'r of. Report for 1906. 2: 1229-55.)

Summaries, not text, in most cases.

427. The new Prussian school law of 1906. (U. S.—Education, Comm'r of. Report for 1906. 1: 35-72.)**428. Rogers, H. J.** Educational legislation in 1905. (Educ. rev. Jan., 33: 46-58.)

A similar review for 1906 appears in Bulletin 113 of the New York State Library, pp. 233-242.

379.15. SCHOOL SUPERVISION.**429. Elliott, E: C.** A type of positive educational reform. (Educ. rev. Apr., 33: 344-55.)

Describes the workings of the county school board conventions with special reference to Wisconsin, and shows them to be valuable factors in public rural education.

430. Hartmann, C. G. A study in school supervision with special reference to rural school conditions in Texas. 180 p. O. (Bulletin of the Univ. of Texas. No. 90.)

Author is superintendent of public instruction in Travis County, Tex., and the monograph was prepared while a graduate student at the university. It is a study of the origin, manner, and effectiveness of county supervision of schools, not only in Texas but throughout the country. The writer is a strong believer in the system.

379.23. COMPULSORY EDUCATION.**431. Chrisman, Oscar.** Paying children to attend school. (Arena, Feb., 37: 166-71.)

A new form of compulsory education in opposition to child labor.

432. Compulsory school attendance and its relation to the general welfare of the child. (U. S.—Education, Comm'r of. Report for 1906. 2: 1263-90.)

Discusses the relations of child labor, juvenile delinquency, school hygiene, and truancy to compulsory attendance.

433. Sullivan, J. D. A summary of the compulsory attendance and child labor laws of the states and territories of the United States. 112 p. O. (N. Y. state library bulletin 114.)**379.5. SECONDARY EDUCATION IN DIFFERENT COUNTRIES.***France.***434. Compayré, Gabriel.** Public instruction in France in 1906. (Elem. school teacher, Mar., 7: 369-78.)

Indicates the essential features of the changes which the impulse of republican government has wrought in French education within the past quarter of a century.

Germany.

435. **The new Prussian school law of 1906.** (U. S.—Education, Comm'r of. Report for 1906. 1:35-72.)

Gives the text of the law, extracts from discussion in Parliament, and domestic and foreign press notices.

436. **Ruediger, W: C.** The schools of Hamburg, Germany. (Educ. Dec., 28: 224-32.)

Account of a personal visit to a Realschule, a Volksschule, and a Lehrer Seminar, with comments upon the discipline and methods of instruction and a brief statement of teachers' salaries in Germany.

Great Britain.

437. **Findlay, J. J.** Churches and the schools. (Educ. rev. Feb., 33:186-92.)

Discusses the feeling of teachers toward tests for religious beliefs or "fitness to teach" as bearing on the educational struggle in England. Reprinted from the Westminster Gazette, London.

438. **Foster, Michael.** Education, elementary and secondary. (Nineteenth cent. Mar., 61: 490-500.)

Review of a report of the consultative committee of the English board of education on questions affecting higher elementary schools.

439. **Great Britain—Education, Board of.** Judgments of the Divisional court, Court of appeal, and House of lords in the case of the king v. the County council of the West Riding of Yorkshire. 42 p. O. ([Parliament. Papers by command] Cd. 3301.)

A suit to determine whether the county council should pay for denominational religious instruction in voluntary elementary schools. The highest court gives judgment in the affirmative.

440. **Kandall, I. L.** The Irish intermediate system. (Jour. of educ. (Lond.) June, n. s. 28: 397-99.)

Shows that the great need of Irish secondary education is relief from the incubus of an examination system.

441. **Lawson, W. R.** John Bull and his schools; a book for parents, rate-payers and men of business. 304 p. D. Blackwood, 5s.

442. **National union of teachers.** Handbook of education, prepared by J. H. Yoxall and Ernest Gray. 591 p. D. N. U. T., Bolton House, 67 & 71, Russell Square, London, W. C. 3s. 6d.

Contains particulars respecting the organization and administration of elementary and secondary education in England and Wales. With the "Companion to the N. U. T. Code" and the N. U. T. edition of the code of parliamentary statutes and regulations this present volume forms a complete survey of English popular educational machinery.

443. **Sadler, M. E.** The educational awakening in England. (N. E. A. 50th anniv. vol. p. 361-366.)

444. ——— French influences in English education. (Educ. rev. Feb., 33:145-61.)

Address delivered at London University, June, 1906. Shows that France gave England much of the form of its ancient university institutions and inspired Englishmen with the love of scholastic philosophy. Reprinted from Modern Language Teaching, October, 1906.

445. **Sadler, M. E.** Influence of the state in English education. (Church quar. rev. Oct., 65: 166-92.)

"The contention of this article is that under the conditions which prevail in England the part of the state is to inspect, recognize, encourage, and (when needful) aid every kind of efficient and needed school."

446. ——— President's address, delivered before the Educational science section of the British association for the advancement of science. (In British association for the advancement of science. Report, 1906. p. 764-76.)

A review of the general course of events in contemporary English education.

447. **Schoolmasters' yearbook and directory 1907.** 1046 p. D. Sonnen-schein, 5s.

Fifth issue of a most useful current reference book on secondary education in England and Wales. The general scope and character are unchanged, part 2 (about half the book) being a directory of masters and schools.

India.

448. **Education.** (Imperial gazetteer of India. Clarendon press, \$2. 4: 407-56.)

A survey of conditions and facilities for public education as they were in 1901-2, with a full account of how the Indian state schools are administered.

United States.

This section is meant to include only current discussion relating to present conditions. All history is found in section 370.9, subhead United States. Matter on education in the separate States is arranged at the end of this section alphabetically under the names of the States. A current chronicle of educational events in the United States is found in each number of the Forum.

449. **Maxwell, W. H.** Present needs of the public schools. (Nation, 25 April, 84: 370-81.)

"In the present article I shall speak chiefly of the New York City schools with which I am most familiar, but many of my arguments apply to the school systems of all our larger cities." Topics discussed are: Smaller classes in elementary schools; changes in compulsory-education law; high-school administration; more workshops, kitchens, and kindergartens; schools for defectives; physical examinations; more money.

450. **Salmon, L. M.** The encroachments of the secondary schools on the college curriculum. (In Association of colleges and preparatory schools of the middle states and Maryland. Proc. of twentieth annual, 1906. p. 56-63.)

451. **Thorndike, E. L.** A neglected aspect of the American high school. (Educ. rev. Mar., 33: 245-55.)

States that the variability in the size of the teaching staff and size of the student body are not taken into account in the discussion of secondary school problems. Accompanied by tables of comparative statistics arranged by States.

452. **Why is public education in the United States not as successful as it is in Germany?** (Educ. rev. Mar., 33: 217-44.)

Translated from the German by Prof. Rudolf Tombo, Jr., of Columbia University. States that American schools are not able to produce the excellent results secured by German schools, and discusses the following causes as responsible for this condition:

(1) Causes beyond the teacher's control, under which he includes: Composition of our mixed population, inclination of our people to change their abode, local self-government, which excludes national concentration in school organization; failure to enforce compulsory attendance laws; discrepancy between enrollment and actual attendance; lack of provision for defectives or backward

children; short school year; difficulties of English language; failure to teach metric system, and introduction of many specialties into course of study.

(2) Evils which are remedial in part, under which are mentioned: Waste of time in instruction, poor methods of teaching, foolish and sentimental discipline, insufficient training possessed by American teachers, low salaries, and bad methods of promotion, and the elective system in secondary schools.

California.

453. **Hershey, A. S.** Japanese school question and the treaty-making power. (Amer. pol. sci. rev. May, 1: 393-407.)

Did San Francisco's action infringe Japanese treaty rights? Has the Federal Government the right to interfere with the direction of the public school system of a State or city? Both questions are argued in the negative.

District of Columbia.

454. **Education in the district of Columbia.** (Educ. rev. Feb., 33: 100-20.)

The writer holds that evils and difficulties in effective school administration are inherent in the form of government of the District. The schools are torn between the dual and conflicting powers of Congress and the District board of education.

Illinois.

455. **Webster, W. G., ed.** The Evanston village high school. 128 p. O. Editor, 702 Rector bldg. Chicago, \$2.

Of interest to the former students or friends of the school.

Massachusetts.

456. **Spencer, David.** School reform in Boston. (Atlantic, July, 100: 45-53.)

Describes the many reforms in administration of the Boston schools which resulted from the reduction of the membership of the school committee from 25 to 5.

New England.

457. **Young, W. H.** The high schools of New England as judged by the standard of the college certificate board. (School rev. Feb., 15: 134-44.)

Investigates existing conditions in order to determine how successfully the high schools are meeting the college requirements, and expresses the opinion that present methods in New England do not solve the problem of articulation between high school and college. Shows an appalling number of schools below the standard, and suggests that a strongly centralized system of high schools, substituted for the prevalent local autonomy, would remedy present evils. See also No. 458.

458. ——— The standardization of the New England high schools. (School rev. Apr., 15: 278-83.)

The great defect is lack of uniformity. Recommends State inspection, and shows the advantages which would result from its adoption. See also No. 457.

Texas.

459. **Hartmann, C. G.** A study in school supervision with special reference to rural school conditions in Texas. 180 p. Q. (Bulletin of the Univ. of Texas, no. 90.)

AUTHOR AND SUBJECT INDEX.

The numbers refer to item, not to page. Anonymous books and articles and periodical titles are not entered, but entries are made for authors of reviews and for the names of persons about whom articles or books are written. References to subjects are printed in small capitals.

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MUSIC EDUCATION IN THE UNITED STATES

SCHOOLS AND DEPARTMENTS OF MUSIC

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SPARTANBURG, S. C.



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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, June 23, 1908.

SIR: I have the honor to transmit herewith the manuscript of a report on the present status of music education in the United States, prepared by Prof. Arthur L. Manchester, of Converse College, South Carolina, and to recommend its publication in the Bulletin of the Bureau of Education.

This report has been prepared in accordance with an urgent recommendation of the Music Teachers' National Association, conveyed through the president of that organization, Prof. Waldo S. Pratt, of the Hartford Theological Seminary. Professor Manchester, who had been appointed by the executive committee of that association as chairman of the committee to consider the gathering of statistics concerning music education in the United States, kindly consented to edit this report for the Bureau of Education. The detailed information upon which it is based was collected through the statistical division of this office in cooperation with Professor Manchester.

The growing recognition of music as an essential part of our plan of public education, and a peculiarly rich and vital part of our public education, emphasizes the need of such information as is embodied in this report. The latest publication of this kind issued by the Bureau of Education was that which appeared in the year 1886. The subject is so large that unfortunately it has been found impracticable to include in the paper here submitted an account of music as taught in our public elementary schools. This part of the subject is reserved for later treatment.

Very respectfully,

ELMER ELLSWORTH BROWN,
Commissioner.

The SECRETARY OF THE INTERIOR.

FOREWORD.

In no profession or field of educational activity is there available so meager an amount of accurate data upon which to base plans for future development or to use in the determination of results achieved as in that of music. There is no coherence in the general scheme of music education, and there can be none while so little is known concerning what is done in the field of musical endeavor. To define the status of music education in the United States has been practically impossible. The utter lack of systematic courses of instruction, the widely varying standards of merit, and the absence of cooperation upon the part of those engaged in music teaching not only have made impossible any accurate computation of the results which have accrued from music education, but are serious obstacles in the way of future development.

Musicians are not yet fully agreed among themselves as to what constitutes music education. The definition still varies according to the standpoint of the definer. The composer, the performer, the theorist, the pedagogue, will each interpret it in the light of his own specialty. It is this lack of system, this indefiniteness of aim, that have repelled those who mold educational opinion, and have caused them to withhold from music that educational value which its votaries claim for it, but which has been obscured by the desultory nature of music instruction. Yet, despite this serious defect, its claims have impressed thoughtful investigators. This lack of system could not entirely hide the evidences of good work being done, and the desire for a more complete and exact knowledge of what is really being accomplished, of the real status of music education in this country, has been felt not only by members of the musical profession, but by those interested in educational movements generally.

It is known that large sums are expended annually for music instruction, that many students and teachers are engaged in it; but what its real proportions are, to what extent it is becoming systematized, what attitude independent schools of music and institutions having music departments maintain toward it, just how serious is the purpose of those who are active in the musical profession, what grade of work is demanded by institutions that announce graduate courses of study, and how these grades are determined are questions

to which satisfactory answers are not now to be given. It is to supply data for the determining of these points that the present inquiry is undertaken. It is not the intention of this inquiry to give decisions as to any point at issue; it simply proposes to lay before those interested certain accurate and authoritative information upon which they may base their own judgment.

The field to be covered is too large to be included in a single inquiry. The scope of this investigation, therefore, is confined to music education in independent schools of music and in institutions maintaining music departments. It is obvious that that largest of all fields, the work of the private teacher, could not be included in this inquiry, and it was thought best to begin the gathering of musical statistics with the work done in the institutions which really dominate educational policies, musical and otherwise.

The purpose is to secure definite information regarding:

1. The organization of and manner of conducting these schools and departments.
2. The number of instructors employed, with branches taught, and number of hours per week devoted by each instructor to instruction in each subject.
3. Number of students enrolled, with requirements for entrance, and the shortest period for which students are received.
4. The nature and scope of subjects included in the curriculum, with requirements as to time devoted to each, requirements for graduation (with or without degree) or for certificate, and the number of students who have received such degrees or certificates within a definite period of years.
5. The manner of advancing students from grade to grade, with methods of examination and marking.
6. The correlation of music and nonmusic courses.
7. Amount expended on music instruction and value of plants devoted to musical purposes.
8. Existence of libraries, with number of books contained therein, and number of museums of musical instruments, with information as to their size and character.

Two questionnaires were prepared, and were sent by the Bureau of Education to—

Independent schools of music,
Colleges and universities,
Colleges for women,
Normal schools, and
Secondary schools.

The lists of these institutions were gathered from various sources, about 3,500 receiving the first questionnaire. The second was sent only to those whose replies to the first indicated that they could satisfactorily furnish certain additional information.

This inquiry being the first of its kind, difficulties were met for the solution of which no precedents were available. To be authoritative and reliable it must be discriminating, yet it had no power officially to settle the many vexed questions certain to arise during the course

of the investigation. Among the points which came up for settlement at the outset were:

What shall be the standard of equipment and efficiency demanded to insure listing in the report?

What really constitutes a "school of music?" ^a

What distinction shall be made between schools conducted solely for profit, and those whose aim primarily is educational?

How shall these standards and distinctions be determined?

These are important questions. Their settlement affects the value of the inquiry, yet the statistician has no authority to pronounce judgment.

It was decided, therefore, that in preparing the questionnaires for the inquiry effort should be made so to frame the questions that the answers to them, if properly given, would practically determine these points, the statistics, when published, furnishing evidence to discriminating readers regarding the work done by the institutions replying to the inquiries. To this end, the questions relating to organization and management of finances; to instructors, students, courses of study; to graduation requirements and correlation of courses, musical and nonmusical; to methods of examination and of determining grades, were given particular attention, and have proved to be effective in drawing out the information desired. As was intended, the replies are significant, not only for the precise information they give, but equally so for indicating the attitude of the institutions toward music education.

Naturally, a first inquiry expends much of its effort in breaking ground. Indifference, and even positive disinclination to supply information are met; yet it is hoped that the statistics secured not only will supply definite information heretofore lacking, but will also contribute something, at least, toward the coordination of music schools and uniformity in their courses of study, and be of assistance to those who are striving to have music placed on an equal footing in the scheme of education with other subjects in the curriculum.

Acknowledgment is made to Prof. Waldo S. Pratt, of the Hartford Theological Seminary, and to Prof. F. A. Parker, of the University of Wisconsin, for assistance in securing data.

ARTHUR L. MANCHESTER.

SPARTANBURG, S. C., *June 1, 1908.*

^a Illustrative of the complexity of this question is an instance called to my attention in the course of correspondence concerning this phase of the report. A "Conservatory of Music," with a title national in character, consisted of one back room on the upper floor of a city building, access to it being had amidst a rather forbidding conglomeration of rubbish. The faculty consisted of one teacher—the proprietor. There was not even an attempt at well-defined, coordinated courses of study. Yet it had taken to itself a high-sounding title, and posed as a school of music. This "institution" is long since dead, but there are many others still in existence, masquerading under similar names.

THE STATUS OF MUSIC EDUCATION IN THE UNITED STATES.

I. HISTORICAL DEVELOPMENT.

In order to an understanding of the present status of music in the United States a careful study of the different elements which have united to produce present conditions is necessary. Music is complex; it has its scientific, æsthetic, pedagogic, and cultural aspects, each also complex in character and providing material for serious and long-continued study, each influencing the development of the others. And in proportion as emphasis is laid upon one or the other it is given a bent of development having a strong bearing upon the symmetrical unfolding of the art of music as a whole. So many factors are thus present in the cultivation of music that for the establishment of a thoroughly efficient system of music education the utmost care is essential to the preservation of the proper balance between them. Instrumental music, including various instruments and the orchestra; vocal music, including solo singing, choral singing, opera, and oratorio; theory, including grammar, form (architectural structure), and composition; the meaning of music as exemplified in these various manifestations; and last, but far from least, the state of musical taste among the people, are factors which must be understood, for they are capable of pedagogic treatment. It is readily seen that the teaching of any one phase of music should be conducted with the reciprocal nature of all musical effort clearly kept in view, yet the failure of musicians in this respect is shown in the history of music education from its beginning until within the last ten years.

It would be well if the historical summary which follows could enter enough into detail to give a more complete view of music history in this country, but the limits of the work forbid, admitting only such facts as bear upon the development of its pedagogic side. In order that those who may wish to pursue the subject further may do so, a bibliography of the history of music in America is subjoined.

BEGINNINGS OF FORMAL MUSIC EDUCATION.

Formal music education has been developed chiefly through the activities of private teachers, independent music schools, and the

teaching of music in the public schools and in colleges and universities. Efforts in all these directions have been influenced and modified by the establishment of orchestras and smaller bodies of instrumentalists in various cities, and the introduction of opera in a few of the largest cities in the country; but regarding these proceedings present limits forbid the entering into detail. Formal music education began with the institution of singing schools, whose purpose was the improvement of church music by teaching youths and adults to sing by note. They were doubtless stimulated by an increasing interest in church music growing out of the crude psalmody of the Puritans. Their educational value was small, those who conducted them possessing slight musical equipment. Their social features had more to do with their popularity than their educational advantages. They were peripatetic, moving about from place to place. Despite their weaknesses they stimulated desire for better things, and the interest they aroused resulted in the formation of choral societies, which later developed into permanent bodies between which and the music festival a direct relation can be traced. The first of these societies was that at Stoughton, Mass., which had its beginning in 1786 and which still exists. In 1815 the Handel and Haydn Society of Boston was founded. This society exerted an increasing influence on musical progress, and is still in existence, its records forming a valuable contribution to the history of musical development.

Musical conventions, which are still held in various parts of the South, were a combination of the old singing school and the choral society. Held in some convenient center, they attracted participants from quite considerable distances. At the conclusion of a more or less serious series of lessons in note reading and the rudiments of music, a concert was usually given, which the public was invited to patronize—largely for the benefit of the conductor. While the work of these conventions was lacking in finish, greater good was accomplished by them than we in this day are prone to give them credit for.

The value of these early efforts lay principally in their direct contact with the people. The modicum of musical instruction provided by them broke ground for later and more pretentious instruction and led to the discussion of methods of teaching, but was less influential than the spreading of musical culture among the people which ensued.

With the growth of interest in music naturally came the effort to train children in the rudiments of music, and a number of pioneers in this field began work early. N. D. Gould, of Boston, organized classes for children in 1824, or earlier, as William Tuckey had previously done in connection with the charity school attached to Trinity Church in New York about 1753. But the title of founder of this phase of music teaching really belongs to Lowell Mason, who went

to Boston from Savannah in 1827. He was better qualified for the work he undertook, not only by reason of his musical equipment, but also because of his study of the Pestalozzian principles of teaching and his possession of marked zeal and personal magnetism. His ideas as to the place of music in general education were definite and advanced. In 1832 he organized the Boston Academy of Music, outlining plans for the promotion of music education in various ways, including the instruction of children and the establishment of normal courses for teachers. This institution soon attracted 1,500 pupils, a significant indication of an awakening interest which needed only well-directed efforts for its rapid advancement. His labors culminated in 1836 in permission from the authorities for trial classes in certain public schools in Boston. The results were so satisfactory that in 1838 Mason was placed in charge permanently. He continued in this service, however, only until 1841, when he was succeeded by B. B. Baker. Mason's normal classes attracted teachers from a wide area, and efforts based upon his methods were initiated in several other States in the East.

New York was also taking steps in the direction of teaching music to children. In 1835 Darius E. Jones taught for some time in one of the city schools with sufficient success to insure permission to continue at the option of the local board, provided no expense was incurred and regular studies were not interfered with. Attempts to gain a definite place for musical instruction, however, were not successful, no effective recognition of music being given until about 1853. The earnestness of its advocates was indicated by their willingness to provide the first pianos introduced in the New York schools by paying for them themselves or by means of concerts given by the children.^a Efforts in Cincinnati, where Lowell Mason's brother, T. B. Mason, organized music classes similar to those in Boston, eventuated in the introduction of regular instruction in the public schools under the direction of William Colburn. Pittsburg dates the beginning of its instruction in music about 1840. N. D. Gould, to whom reference has already been made, states in his book, *Church Music in America*, that he was active in establishing singing schools in Massachusetts, New Hampshire, Rhode Island, New York, and New Jersey from about 1820, and especially after 1830. Of these labors he was very proud, expressing extreme satisfaction that he could look back upon the fact that he was the first to introduce the formal teaching of children to sing.

Such were the beginnings of what, after the interruption of the civil war, which seriously retarded efforts of this nature, became the

^a See paper by George F. Bristow in *Proceedings of the Music Teachers' National Association for 1885*.

great public school system of music education. Devoted as these men were to the work they had entered upon, there was sown even at this early date the seeds of that misunderstanding and narrowness of view which have been prominent in music education during all its history in this country. Conflict between these teachers, who based their work on the psalmody of the period, and those professional musicians who cultivated music as an art, began to develop at once, and a mutual depreciation arose.

With the practice of music, in its earliest stages, largely vocal, there was comparatively little demand for the services of teachers of instruments; but with the growth of musical taste, the making of pianos, and the cultivation of orchestral music, the number of trained musicians engaged in teaching gradually increased in the eastern cities, until there were scattered about in various parts of the country a sufficient number to produce a marked impression upon the art ideals of the country. This number was largely increased and its influence strengthened by the settlement in America of refugees from Europe during the decade from 1840 to 1850, and after the civil war it became an important factor in music education. The diversity of interests of those engaged in teaching, the conflict of opinion as to what should hold the most important place in the development of music, and the great increase in the number who took to teaching it as an easy way in which to make a living or secure pocket money, soon resulted in confusion and the setting up of false standards, which exerted a baneful influence on the whole system of music education.

SCHOOLS AND CONSERVATORIES OF MUSIC.

The early enterprises which might be dignified by the name of schools were of doubtful character and were devoted solely to the rudiments of music, and, in all probability, were given an impetus by singing classes. The first music school in the true sense was that projected by Eben Tourjée, of Fall River, Mass., and put into operation at East Greenwich, R. I., in 1859. Later, Tourjée started a conservatory at Providence, and, in 1867, founded the institution that, in 1870, was incorporated as the New England Conservatory of Music. Before this (in 1863) he had spent some time in Europe investigating methods there and studying with Haupt and other prominent teachers. His ideas were progressive and sound, and his talent for organization enabled him to carry them out with good effect. He was the first to introduce class instruction in other subjects than singing. His perception of the interrelation of the various branches of the musical art was clear, and it was his purpose to work out a well coordinated curriculum. The New England Con-

servatory has stood for serious music study ever since, and has grown in size and influence until it is probably the best known institution of the kind in America.

Many institutions, with similar aims and established about the same time or at later periods, have become integral parts of the American musical education system, exerting great influence on American music life. Among them may be mentioned the Boston Conservatory of Music, established by Julius Eichberg (1867); the Chicago College of Music, Ziegfeld (1867); the Cincinnati Conservatory of Music, Miss Baur (1867); the Oberlin Conservatory of Music (1867), now incorporated with Oberlin College; the Philadelphia Musical Academy (1869); Dana's Musical Institute at Warren, Ohio (1869); the Cleveland Conservatory of Music (1871); the Detroit Conservatory of Music (1875), and others of later founding. With these have sprung into existence a host of independent schools calling themselves conservatories, local in influence, whose methods of procedure and artistic ideals vary according to the purposes of their founders. Some of them doubtless are sincere in their aims, and strive to do work as thorough as their resources permit; but in too many cases mercenary motives are behind their establishment, and their entire workings are dictated by a commercial spirit.

DEPARTMENTS OF MUSIC IN COLLEGES, ETC.

The institution of departments of music in colleges is so intermingled with the founding of these independent schools that no sharp line of distinction can be drawn as to their early history. Here, too, the motives animating those concerned have been mixed. While serious educational aims have inspired some, in many instances expediency has ruled the situation, and the treatment of music education in colleges, particularly those for women, and in secondary schools has been one of confusion, and, too often, of low standards. The larger institutions are notable exceptions. As early as 1837 a society known as the Harvard Musical Association, composed of alumni of Harvard College, announced as its ultimate object—

The advancement of the cause of music, particularly in this university. We would have it regarded as an important object of attention within its walls, as something which sooner or later must hold its place in every liberal system of education—and that place not accidental or a stolen one, but formally recognized. We that love music feel that it is worthy of its professorship, as well as any other science.

This statement, quoted by Ritter in his "Music in America," is a forerunner of many such avowals in recent years. While the object was not immediately realized, nearly thirty-five years elapsing before Harvard fully met the desires of its promoters, the time

has come when not only in that university but in others such recognition is accorded. But it was not until 1860 that a movement in that direction was made, and then it was step by step. First an instructor in music was permitted to do some teaching in certain subjects as an irregular part of the curriculum. Notable instances are Harvard, with John K. Paine, who began his work in 1862, reaching a full professorship in 1876; Oberlin College, Fenelon B. Rice, in 1869; Vassar College, Frederic Louis Ritter, in 1867; the University of Pennsylvania, Prof. Hugh A. Clarke, in 1875. Then came the granting of credit for certain courses in music toward the degree of A. B., Harvard taking the lead in 1870. Next followed the final step of granting credit toward entrance for musical qualifications, which has been taken only within the past six or eight years.

PROGRESS MADE.

The steps in the development of formal music education here concisely stated have occupied more than a century in the taking. If the progress made during that time does not compare favorably with that in other fields of educational effort, it should be remembered that many incentives so prominent in the others have here been lacking. Music has not been considered so vital a part of the political, moral, and social life of the nation as those arts upon which depends the earning capacity of individuals. Not only were its exponents compelled to clarify their own views concerning its purposes and methods, to find themselves, in short, but also to make head against a public opinion dominated by strong utilitarian ideals. The absence of unifying agencies has weakened, and too often nullified, the efforts of musicians, leaving them solitary and unsupported in their attempts to build up an educational music system. Yet, unsatisfactory as are many present conditions, the change from the unmusical psalm singing of the Puritans, the ambitious rather than musically satisfying concert performances of fifty years ago, and the low state of musical taste of a large part of the nineteenth century, to the artistic concerts, the immense attendance upon public performances, and the higher state of musical culture and critical acumen of the people now witnessed, is indicative of a long stride forward.

WORKS ON THE HISTORY OF MUSIC IN AMERICA.

Those who wish to investigate more fully the growth of music and music education in the United States are referred to the following publications, and to the list of works on music education on pages 83-84:

Brooks, Henry Mason. *Olden-time music; a compilation from newspapers and books.* With an introduction by Professor Edward S. Morse. . . . Boston, Ticknor and company, 1888. [ix] xx, 283 p., front., illus. 12°.

"The design of this work is to give some account of music in 'ye olden time' in New England."—Pref.

Elson, Louis Charles. *The history of American music.* With twelve full-page photo-gravures and one hundred and two illustrations in the text. New York, London, The Macmillan company, 1904. xiii, 380 p., incl. illus., plates, ports., front. 4°. (*The history of American art*, ed. by J. C. Van Dyke.)

"General bibliography," pages 367-368.

[**Howe, Granville L.**] *ed.* *A hundred years of music in America.* An account of musical effort in America during the past century . . . together with historical and biographical sketches of important personalities. W. S. B. Mathews, associate ed. Chicago, G. L. Howe, 1889. ix, 6-715 p., illus. (incl. ports., facsimis.). 8°.

Music Teachers' National Association. *Papers and proceedings, 28th annual meeting, Oberlin, Ohio, June 26-29, 1906.* [Hartford, Conn.] published by the association, 1906. 200 p. 8°.

— *29th annual meeting, Columbia University, New York City, Dec. 27-31, 1907.* [Hartford, Conn.] published by the association, 1908. 284 p. 8°.

Ritter, Frédéric Louis. *Music in America.* New ed., with additions. New York, C. Scribner's sons, 1890. xiv, 521 p. 8°.

"Musical examples," pages 508-513.

Ryan, Thomas. *Recollections of an old musician.* New York, E. P. Dutton & Co., 1899. xvi, 274 p., pl., port. 8°.

Sonneck, Oscar George Theodore. *Early concert-life in America (1731-1800).* Leipzig, Breitkopf & Hartel, 1907. 338 p. 4°.

Bibliographical footnotes.

II.—RESULTS OF THE INQUIRY.

The statistical tables contained in this work are based on questionnaires sent out by the Bureau of Education in 1907. Replies were received from 1,088 institutions. Of these, 381 gave no information which could be used, or were not organized institutions; 112 colleges, normal schools, and universities reported no music departments maintained; the remaining 595 furnished more or less completely the information desired. Financial statements were not made by 348 of this number. The resulting statistics have been classified so that the tabulations for independent schools of music, colleges and universities, colleges for women, normal schools, and secondary schools appear separately. A study of tables 6, 7, 8, 9, and 10 will show that the most important institutions in each class are represented. With perhaps two or three exceptions, all the leading independent schools of music are included. In each of the other classes institutions most influential in educational work have responded. In the 1906 Report of the Commissioner of Education, 577 institutions of higher education, not including schools of technology, are reported as replying to the inquiries of the Bureau. Two hundred and eight of these institutions, including those of highest rank, have responded to this first specific inquiry for detailed statistics regarding music instruction. It is fair to believe, therefore, that the statistics herein given truthfully reflect the conditions now existing in organized music education.

INCORPORATION OF SCHOOLS.

It will be noted that of the 595 schools reporting, 281 are incorporated, 170 not incorporated, and 144 do not reply to this question. The following table gives this information in detail:

Class of institutions.	Incorporated.	Not incorporated.	Not reporting.	Total.
Independent schools of music.....	24	34	3	61
Colleges and universities.....	65	37	49	151
Colleges for women.....	48	2	7	57
Normal schools.....	30	29	29	98
Secondary schools.....	114	68	46	228
Total.....	281	170	144	595

In schools which are not incorporated the financial management is usually in the hands of the director or proprietor. In the majority of cases the director and proprietor are one.

INSTRUCTORS AND SUBJECTS TAUGHT.

The total number of instructors in independent music schools reporting is 607. The number in each school varies from one to fifty-six. In many schools specialists and lecturers are called upon for special instruction, giving only a few hours a week to the institution. The hours per week devoted to their respective schools by individual instructors range from two to sixty. The average number for each instructor in the schools reporting is twenty. The subjects taught refer mainly to performance and composition and professional training. The various instruments, voice culture and singing, and theoretical subjects, with more or less attention to esthetics, comprise their curricula. In the largest conservatories modern languages are taught as a part of courses in singing, and dramatic action and operatic repertoire are given considerable attention. Technique, interpretation, and repertoire are the chief desiderata.

Of 334 universities and colleges for both sexes and colleges for women responding to the inquiry, 95 report no departments of music. In many of these glee clubs and orchestras are maintained by the students, but no specific instruction is given. The number of instructors engaged in 208 of these institutions is 974. The number of hours per week devoted by each to instruction ranges from two to forty. The majority give practically their entire time to the institution with which they are connected. The average number of hours per week for each instructor is twenty and one-half.

The subjects taught are the same as in independent schools of music. Instruction is given in practical music, from elementary work to concert playing and singing, theoretical subjects, history of music, and esthetics. While each is organically connected with its college or

university, educationally the tie binding them in the majority of cases is elastic, and they are managed as independent music schools, with the same musical aims and ideals. In universities and colleges of the highest grade, however, theoretical subjects, including harmony, counterpoint, canon, fugue, and composition are the institutional courses, practical music being totally ignored in some, and only incidentally cultivated in others. In them, as well as in a considerable number of smaller institutions, musical appreciation, including form and analysis, is offered as a regular course.

Replies were received from 130 normal schools, 98 giving statistics which could be embodied in this report. Vocal music, with especial reference to its use in the public schools, is the leading subject, many schools maintaining no regularly organized music departments. In those which do, the subjects and methods and aims of instruction are similar to those in the institutions already mentioned. Two hundred and twenty-five instructors are reported as engaged in giving music instruction in normal schools.

A statement of the work in secondary schools would be a recapitulation of what has already been said, with the addition that the standards of excellence and efficiency do not as a rule compare favorably with those in the institutions of higher education. Of the 228 schools reporting, 46 per cent employ one or two instructors whose entire time is given to the institution and whose duties are to give instruction in piano, singing, organ, violin, and theory. There are schools among the number reporting which have well-organized departments and well conceived courses of study. In some mention is made of the advantages accruing from the study of music in connection with subjects in the literary departments, and in a few instances the completion of a high-school course of at least three years is required before graduation in music. Attention here, as in many institutions in the other classes, is directed mainly to performance, with some emphasis on theoretical subjects. The number of instructors reported is 700.

STUDENTS ENROLLED.

The total number of students enrolled is 77,359. According to the Report of the Commissioner of Education, the enrollment of students in colleges and universities for 1907 was 149,700. The enrollment of music students in 208 of these institutions was 26,743, over 17 per cent of the entire number. Entrance requirements exist in very few instances. The shortest period for which students are received is five weeks in certain of the independent schools. The majority of schools do not receive students for a shorter period than ten weeks. In colleges and universities the shortest period is one

term or semester. The following table gives the number of music instructors and students in 1907, and the number of graduates and students receiving certificates in the last five years:

Class of institutions.	Schools reporting.	Instructors.	Students.	Graduates in last 5 years.	Students receiving certificates in last 5 years.
Independent schools of music.....	61	607	17,122	1,962	1,971
Colleges and universities.....	151	680	18,971	1,652	633
Colleges for women.....	87	294	7,772	491	323
Normal schools.....	98	225	18,994	653	86
Secondary schools.....	228	700	14,500	634	686
Total.....	595	2,506	77,359	5,392	3,649

NATURE AND SCOPE OF SUBJECTS.

An examination of the music courses offered by the institutions replying to this inquiry classifies them into—

Theoretical and æsthetic courses,
Practical or applied courses,
Cultural courses.

To the first class belong all such subjects as foundation principles, harmony, counterpoint, canon, fugue, composition, form, history of music, and orchestration; to the second, all courses in the mastery of any instrument and of singing, and to the third, those courses offered for the purpose of developing an appreciation of music, including foundation principles, enough of the grammar and form of music to give an understanding of its structure, history, and analysis of compositions.

The scope of these courses varies with the resources and seriousness of purpose of the institutions offering them. In those of the highest rank, they are well planned, carefully coordinated, and thoroughly carried out. In independent schools of music there are no entrance requirements. In a number of leading colleges a knowledge of rudiments is demanded as an entrance requirement. As has already been indicated, in a large majority of institutions the courses in practical music occupy the foremost place in the curriculum. This is so largely the case that it can truly be said that the nature and scope of music education is still chiefly confined to the development of a greater or less degree of virtuosity in performance, with a considerable amount of attention given to instruction in foundation and theoretical principles. Many independent schools of music, it is true, and a large number of colleges and universities, and a smaller number of secondary schools demand work of the most exacting nature; their courses are thorough, comprehensive within their limits, and at their completion reach a high standard of artistic excellence. But in the greater number of institutions of all classes

the coordination of courses has not reached so satisfactory a stage, and performance overshadows all else, the standards here also differing considerably.

The time required for the completion of these courses indicates their nature and scope. Some institutions offer certificates at the end of two years of instruction; others on completion of a stated portion of the regular course for graduation. Some schools name from three to seven years as necessary for graduation; others, again, give no time limit, setting instead a standard of accomplishment which must satisfactorily be met before graduation.

ILLUSTRATIVE CURRICULA.

It is obvious that the educational value of a course of study does not lie in a statement of its requirements, however comprehensive and systematic that may be. A paper course may be a model of excellence, but unless its provisions are properly carried out and its requirements strictly met, its worth educationally is nil. It is certain that too great differences in standards exist in schools offering practically the same courses. Hence the mere cataloguing of courses is not a criterion as to the educational status of the schools offering them. Yet the following curricula, offered by representative institutions, whose standing is such as to assure intelligent enforcement of course requirements, are significant as showing the care which is being taken by institutions of serious purpose to properly coordinate the various branches of musical instruction into a comprehensive educational scheme. The fact that these curricula are typical is indicative of widespread efforts on the part of musical educators to provide such schemes of music education, and gives evidence of a purpose which, in time, must also bring about a greater uniformity of standards.

The curricula cited are offered by certain universities and colleges and independent music schools representative of those which have replied to the inquiries of this investigation. They illustrate the purely theoretical courses offered by institutions which do not give instruction in practical music and by those which combine theory and practice. The curricula from independent music schools are from a metropolitan conservatory with ample resources and from a smaller school, located in a small city, which is typical of the larger number of such institutions. Entrance requirements are given where such exist, and the entrance requirements of one institution, which stands almost alone in this particular, are given in full.

The first two courses are offered by independent schools of music—the first by one with a good endowment and large receipts from tuition; the second from a conservatory which is dependent upon its tuition fees alone for support.

CURRICULUM NO. 1.

LIST OF SUBJECTS TO BE TAUGHT.

Acoustics.
 Conducting.
 Elements of music (notation, rhythm, etc.).
 Ensemble playing.
 History and æsthetics of music.
 Interpretation, instrumental and vocal.
 Languages in their relation to music.
 Music dictation.
 Music form and analysis.
 Music pedagogy in all its branches.
 Opera singing.
 Oratorio singing.
 Organ playing.
 Organ structure.
 Pianoforte playing.
 Score reading and playing from the old clefs.
 Sight singing and sight playing.
 Song singing.
 Stage deportment and dramatic action.
 Stringed-instrument playing (violin, viola, violoncello, double bass, and harp).
 Theory: Harmony, counterpoint, and composition.
 Vocal culture.
 Wind-instrument playing (clarinet, oboe, horn, trumpet, flute, etc.).

COURSES OF STUDY.

All regular students will be required to follow a prescribed course of study designed to impart a broad and liberal knowledge of the art. It is not the wish that instruction shall be given only to persons who intend to follow music as a vocation. A thorough musical education is offered to all who desire seriously to learn the art, be their purposes what they may. There are regular and special courses in each branch of study. For the former, no formal entrance examination is required. Applicants are examined, but solely with a view to assigning them to the course of study for which they seem best fitted. Nevertheless, should students, in the regular courses, through want of capacity or industry, fail to disclose satisfactory results, they will not be allowed to continue their studies. In order to be admitted to the special or artists' courses, applicants must satisfy the director as to the degree of proficiency already attained, and if deemed necessary by him must pass an examination. The institute also provides a course of study for persons who do not play upon an instrument of music, sing, or compose, but who are lovers of music and wish to enhance their enjoyment of it by learning to listen to it discriminatingly, with understanding and appreciation of its beauties. Such listening is also an art capable of cultivation.

The duration of the courses of study varies according to their nature and the rate of progress made by the student. Instruction is individual, but there is also class work, so that each student has the benefit of the instructor's criticisms of his fellows.

The amount of time which a student of any of the principal courses is expected to spend at the school differs according to the nature of the course and the grade of the student. As a rule, he will attend two whole forenoons or afternoons per week, with now and then an additional hour for special lectures, etc. This time would include two half-hour individual lessons in the principal subject. In addition to this, there would be at least one hour of harmony or counterpoint, one hour of ear training and dictation, one hour of sight and choral singing, and one or two hours for lectures.

Attendance at recitals, rehearsals, etc., would probably add an hour or two per week to those enumerated above.

Additional lectures instituted from time to time will be open to all regular students without extra charge. It is the policy of this school to open as many avenues of information as possible to all its students.

EXAMINATIONS AND DISTINCTIONS.

Examinations will be held at stated intervals, and students will be rated according to their ability and the progress they have made. To all students who pass satisfactorily the final examinations in the prescribed, or, as they have been termed herein, "regular," courses of instruction, diplomas will be issued. Students completing any one of the special courses will receive a certificate. Teachers' certificates will be bestowed upon all students who shall successfully pass through any one of the teachers' training courses. Holders of diplomas will form the alumni and alumnae of the institute; holders of certificates will be termed associates.

The courses have been outlined as follows:

SINGING.

REGULAR COURSE. THREE YEARS.

Vocal culture—tone placing, vocalises, interpretation.
 Ear training—sight singing, music dictation, choral practice.
 Elements of music—notation, intervals, rhythm, etc.
 Theory of music—melody writing, harmony, form, analysis, counterpoint.
 Piano playing—for general musicianship.
 Languages—Italian, German, French.
 Attendance on lectures, recitals, rehearsals, and concerts.

ARTISTS' COURSE FOR CONCERT AND ORATORIO.

(*Post-graduate.*)

Songs—Italian, German, and French.
 Recitative and aria.
 Study of the standard oratorios.
 Advanced theory.
 Languages—Italian, German, and French.
 Declamation and stage deportment.
 Ensemble singing, with other solo voices, chorus, and orchestra.
 Attendance on lectures, recitals, rehearsals, and concerts.

ARTISTS' COURSE FOR OPERA.

(*Post-graduate.*)

Study of the standard operas, old and new.
 Advanced theory.
 Languages—Italian, German, and French.
 Declamation.
 Stage deportment and dramatic action.
 Chorus and ensemble practice.

SPECIAL TRAINING COURSE FOR TEACHERS.

(*Post-graduate.*)

Vocal culture.
 Ear training—sight singing, music dictation, choral practice.
 Advanced theory.
 Languages—Italian, German, and French.
 Pedagogy.
 Anatomy of the vocal organs.
 Attendance on lectures, recitals, rehearsals, and concerts.

PIANOFORTE.

REGULAR COURSE. THREE YEARS.

The piano—technic, touch, phrasing, interpretation, etc.
 Ear training—sight singing, music dictation, choral practice.
 Elements of music—notation, intervals, rhythm, etc.
 Theory of music—melody writing, harmony, form, analysis, counterpoint.
 Sight playing—ensemble practice with two pianos and with strings.
 Attendance on lectures, recitals, rehearsals, and concerts.

ARTISTS' COURSE.

(*Post-graduate.*)

The piano—technic, touch, phrasing, advanced interpretation.
 Advanced theory.
 Ensemble playing in chamber music and with orchestra.
 Attendance on lectures, recitals, rehearsals, and concerts.

SPECIAL TRAINING COURSE FOR TEACHERS.

(*Postgraduate.*)

The piano—technic; touch, phrasing, interpretation, etc.
 Ensemble playing.
 Advanced theory.
 History of the pianoforte and its music.
 Pedagogy.
 Practical experience in preparatory teaching.
 Attendance on lectures, recitals, rehearsals, and concerts.

ORGAN.

REGULAR COURSE, THREE YEARS.

The organ—technic, touch, phrasing, interpretation, registration.
 Ear training—sight singing, music dictation, choral practice.
 Elements of music—notation, intervals, rhythm, etc.
 Theory of music—melody writing, harmony, form, analysis, counterpoint.
 Organ structure.
 Organ accompaniment.
 Attendance on lectures, recitals, rehearsals, and concerts.

STRINGED INSTRUMENTS: VIOLIN, VIOLA, VIOLONCELLO, HARP.

REGULAR COURSES, THREE YEARS.

The instrument—its technic, phrasing, interpretation, etc.
 Ear training—sight singing, music dictation, choral practice.
 Elements of music—notation, intervals, rhythm.
 Theory of music—melody writing, harmony, form, analysis, counterpoint.
 Piano playing—for general musicianship.
 Ensemble playing.
 Attendance on lectures, recitals, rehearsals, and concerts.

ARTISTS' COURSES.

(*Postgraduate.*)

The instrument—advanced technic and interpretation.
 Advanced theory.
 History of the instrument and of its music.
 Study of chamber music.
 Ensemble playing with orchestra.
 Attendance on lectures, recitals, rehearsals, and concerts.

SPECIAL TRAINING COURSES FOR TEACHERS.

*(Postgraduate.)***The instrument—its technic from the normal standpoint.****Practical experience in preparatory teaching.****Advanced theory.****Pedagogy.****History of the instrument and of its music.****Study of chamber music and ensemble playing.****Attendance on lectures, recitals, rehearsals, and concerts.**

ORCHESTRA COURSES.

Courses for all orchestra instruments and under teachers representative of the best French, Belgian, German, and Italian schools have been established. They include the following instruments:

Double bass.

Horn.

Bassoon.

Oboe.

Clarinet.

Trombone.

Flute.

Trumpet.

All percussion instruments.

Other wind instruments.

In each case the prescribed course covers, in addition to the principal subject:

Ear training—sight singing, music dictation, etc.**Elements of music—notation, intervals, rhythm.****Theory of music—melody writing, harmony, counterpoint, form, analysis.****Ensemble playing—orchestra practice.****Attendance on lectures, recitals, rehearsals, and concerts.**

POSTGRADUATE COURSE IN THEORY.

Music form.**Double counterpoint.****Music analysis.****Fugue.****Applied counterpoint.****Instrumentation.****Practical composition in all forms.****Score reading, vocal score in the old clefs, orchestra score.**

PREPARATORY CLASSES.

Under the supervision of the principal teachers, students in the special-training courses for teachers (piano or strings) will give lessons, designed to familiarize them with the practical work of teaching elementary pupils who are not yet members of the regular or special courses. The preparatory courses are open to persons of all ages and both sexes, and will prepare them for admission to the regular courses.

LECTURE COURSE.

Subscribers to the lecture course have the right to attend all the lectures and recitals given at the institute.

Following are the subjects for the current year:**The Beethoven symphonies.****The development of vocal art.****How to listen to music.****The history of music.****Music as a culture study, its individual and community value.**

This lecture course is specially designed for persons who wish to increase their capacity for musical enjoyment without making a practical study of the art. The

lectures are illustrated by the performance of music of the highest and most representative kind. It is not enough to read about music, or hear about it, or even to hear it in a purposeless way. It must be heard intelligently to be fully appreciated; and it is the purpose of this course to teach students to listen intelligently.

This curriculum, offered by a school of music well able to carry out its provisions, is a careful attempt to properly coordinate the various subjects germane to the complete music education of teacher, performer, or composer.

CURRICULUM NO. 2.

The following courses are from the catalogue of a conservatory which is a type of many scattered throughout various sections of the United States. Its support is derived solely from its tuition fees. With a still larger number of conservatories whose resources are smaller it represents the predominating class of independent music schools.

PURPOSE OF INSTRUCTION.

It will be the constant endeavor of our instructors in music and drama not only to ground pupils thoroughly in the theory of their art but to give them a finish in execution. Whether students take up their work purely from a motive of self-culture or for a professional career, the method of instruction should be the same. The demand to-day is for practical results, and we need public criticism to ascertain our true merit. For this reason our pupils will be called upon often to appear before audiences.

COURSES OF STUDY.

The conservatory offers systematic courses of instruction in piano, voice culture, organ, violin, violoncello, and orchestral instruments, in orchestral and ensemble playing; all theoretical branches; art of conducting and history of music, and in the art and science of teaching. They comprise five distinct departments of study, as follows:

1. Introductory course or general musical instruction.
2. Advanced course.
3. Teachers' course.
4. Diploma course.
5. Postgraduate course.

INTRODUCTORY COURSE.

This course is open to any student wishing to pursue musical study without reference to graduation, or to prepare for either of the more advanced courses offered. No previous knowledge of music is required. This course includes the elementary classes in which children from seven years upward are taught the principles of music in such a manner as to stimulate true musical appreciation and to lay the foundation for the more advanced work in vocal and instrumental music.

ADVANCED COURSE.

This course is especially offered to advanced students. Applicants must have had musical training and evince sufficient ability to insure progress in their work.

TEACHERS' COURSE.

The preparation of teachers being so important to every successful school, a special course of study calculated to give a thorough training in methods of teaching has been

introduced. A special teachers' certificate will be given to those students who have satisfied the following conditions:

Candidates for graduation are required to have sufficient mastery of some instrument or the art of singing to give a private recital; have pursued studies in the art of teaching, and had practical experience in teaching under the supervision of their teacher for at least one year. The theoretical requirements for this course are the same as in the diploma course.

DIPLOMA COURSE.

The diploma course is open to any person who is qualified to pursue more advanced studies. It furnishes thorough training for entrance into professional life, although it is not restricted to students having such an end in view. No prescribed order of study is laid down, as the varied needs of the students demand an elasticity in the course which precludes the possibility of an adequate statement of required work. The student has to pass an examination so arranged as to demonstrate artistic skill in performance and an accurate and thorough knowledge of the theoretical, historical, and critical aspects of music as an art. Candidates must give a creditable and adequate public performance of a programme as required by the mentioned models, also satisfactorily prepare without aid a composition given fifteen days in advance, read at sight a composition of medium difficulty, and pass successfully the required examination in theory and history of music.

The diploma course may be pursued still further, and for such advanced work a special postgraduate certificate will be issued.

POSTGRADUATE COURSE.

The postgraduate department has for its object the more complete development of those who desire to prepare themselves for positions of large responsibility in the higher walks of the musical profession.

Candidates for admission to the postgraduate course must previously have completed the regular course in the conservatory, and have received its diploma.

VOICE CULTURE.

Tone work—physiology, breath control, voice placing.

Enunciation—attack, release, vibration, legato. (Vowels, diphthongs, and consonants.)

Sight singing—staff notation, rhythm, ear training, harmony.

Repertoire—interpretation and classification.

SONG, ORATORIO AND OPERA COACHING.

Pupils desiring to acquire the true rendition in oratorio solo singing, as exemplified in the interpretation of the great singers and conductors, can secure the necessary knowledge and thus equip themselves for public performances.

ENSEMBLE CLASSES.

Students who have acquired fluency and experience in piano, violin, or violoncello playing are most earnestly advised to enter one of the ensemble classes, thus gaining experience in ensemble playing and accompaniments and acquiring a knowledge of the best chamber music and other instrumental compositions.

SIGHT-READING AND SIGHT-SINGING CLASSES.

These classes afford to pupils an excellent practice in reading at sight, develop the sense of rhythm, give experience in ensemble work, and familiarize the student with the compositions of the great masters.

EXAMINATION FOR DIPLOMAS.

Graduating diplomas are awarded to students who have studied at the conservatory and who successfully pass the examination which the graduating rules of the conservatory demand.

The following examinations will be required:

Piano.—Performance of a composition given fifteen days in advance and prepared by candidate without assistance.

Reading at sight.

Elementary theory.

Advanced theory (at least one year's study).

History of music.

Acceptable performance of five complete compositions from the works of standard composers, including a concerto.

Voice.—Rendition of a composition given eight days in advance and prepared by candidate without assistance.

Rendition at first sight of a composition (words and music).

Rendition from memory of one or more selections from a repertory of six belonging to the oratorio, opera, or song literature.

Elementary theory.

Advanced theory (at least one year's study).

History of music.

Fair piano technique.

Violin and other orchestral instruments.—Performance of a composition given fifteen days in advance and prepared by candidate without assistance.

Performance of a composition at sight.

Elementary theory.

Advanced theory (at least one year's study).

History of music.

Performance of a composition from a repertory of six.

Organ.—Performance of a composition given fifteen days in advance and prepared by candidate without assistance.

Elementary theory.

Advanced theory (at least one year's study).

History of music.

The candidate must give an acceptable performance from a repertory of six compositions.

MODEL FOR GRADUATION.

PIANOFORTE.

Bach—prelude and fugue.

Moscheles—concerto in G minor.

Beethoven—sonata Op. 26.

Chopin—nocturne in F sharp, *fantasie impromptu*.

Brahms—ballade in D, *intermezzo*.

Weber-Tausig—invitation to the dance.

VOICE.

Arias from oratorios and operas.

Group of songs from best German composers.

Group of songs from best Italian and French composers.

Group of songs from best English and American composers.

Candidates are required to be able to accompany songs of medium difficulty.

Violin and organ models to be decided by the directors of the respective departments.

LECTURES ON HISTORY OF MUSIC.

Our free list further includes a course on history of music. This course comprises a series of lectures in which a full analysis of music in its development from ancient times to the present day will be given. The lectures are both instructive and interesting. The following course is scheduled for this year:

1. The Chinese, Japanese, Hindoos, and Egyptians.
2. The Hebrews, Assyrians, Arabs, Greeks, and Romans.
3. Early Christian church music. Efforts at notation and part singing. Popular music in the middle ages: The troubadours, minstrels, minnesinger, meistersinger.
4. Development of polyphony. The old French and Netherland schools. Luther and the German chorale.
5. The classic era of Italy. The different schools. Beginning of oratorio and opera. Instrumental music and instruments.
6. The old French opera. Germany under Italian influence. Bach, the first of the German classicists.
7. The era of the classic composers in Germany. The development of the pianoforte.
8. The Romantic school.
9. French and Italian opera during the last two centuries. Wagner in Germany.
10. The more modern composers, singers and virtuosi. American music. The status at present.

The curricula Nos. 3 and 4 are offered by universities of high rank, the first giving instruction in theoretical subjects only, the second having a completely equipped school of music and giving instruction in both theoretical and practical music. The first grants credit in music both at entrance and toward a degree; the second, toward a degree only.

CURRICULUM NO. 3.

ENTRANCE REQUIREMENTS (HARMONY).

The examination will be adapted to the proficiency of those who have studied harmony in a systematic course of three lessons a week through one school year. In this study some training in pianoforte playing, and the ability to read chorals and moderately easy piano pieces at sight are necessary. This course is equivalent to music 1. The work will consist chiefly of exercises written on figured basses in which all the triads and seventh-chords are to be employed progressively. Exercises must be written in a clear and well-formed notation.

COURSES IN MUSIC.

The aim of the courses is twofold:

1. To provide a thorough training for students who intend to follow the musical profession as teachers and composers.
2. To offer a course of technical study to those who wish to devote themselves chiefly to musical criticism and literature, and for the cultivation of musical taste.

Course 1 is the necessary introduction to all the other courses, except music 3. Proficiency in playing the pianoforte is of great advantage to the student in all the courses, and in 1, 2, 5, 6, and 7 is required. Advanced players on the violin, violoncello, and other orchestral instruments, and vocalists, may take music 1, provided they are able to play chord exercises on the piano.

Courses 1, 2, 5, and 6 must follow each other in regular order.

Course 3 requires practical knowledge of vocal or instrumental music.

Courses 2, 2a, 2b, and 4 require knowledge of harmony.

Courses 5 and 7 require knowledge of harmony and counterpoint.

Students who intend to take only one course in music, for the cultivation of musical taste and general knowledge, are recommended to elect music 3, as best adapted to this end.

Students who intend to specialize in music, by taking several courses, or to try for honors in music, are required to elect music 1 in their first year in college. Students for honors must take the courses in the following order:

Freshman year, music 1.

Sophomore year, music 2 and 4.

Junior year, music 2a or 2b and 5.

Senior year, music 6 and 7.

Music 3 must be taken either in the sophomore, junior, or senior year.

Students for honors in music who enter college in the sophomore year must take the courses in the following order:

Sophomore year, music 1 and 3.

Junior year, music 2, 2a or 2b, and 4.

Senior year, music 5, 6, and 7.

Students who wish to try for honors in music must consult with their instructor in harmony and the head of the department before the end of the first year.

DESCRIPTION OF COURSES.

1. *Harmony.*

The fundamental principles of the theory of music are embodied in the study of harmony, which treats of the different chords in their natural relations and combinations. The subdivisions of the subject are as follows: Intervals, or the measurement of the difference in pitch between one tone and another; triads, seventh, and ninth chords with their inversions and resolutions; chromatically altered chords; augmented chords; cadences; suspensions; passing and changing notes; organ point; modulation.

The work consists of written exercises on basses (both figured and unfigured) and the harmonization of given melodies in three and four voices. These are corrected by the instructor out of the class room and subsequently discussed with the students individually. Many exercises are also worked out on the blackboard by the students.

Modern Harmony, by Foote and Spalding, is used as the basis of the instruction. The treatises of Prout, of Chadwick, and of others are used as reference books, and supplementary illustrations and explanations are given in the class room. The course is open and specially recommended to freshmen.

2. *Counterpoint.*

Counterpoint applies the principles of harmony to the melodious treatment of the several voice parts in combination. The study of this subject naturally follows that of harmony and develops the contrapuntal facility necessary to all forms of composition.

The work will include the free harmonization of chorals and melodies, the various orders of counterpoint, the contrapuntal treatment of cantus firmus in different voices, and simple forms of free composition.

Spalding's Counterpoint will be used as a text-book.

[2a hf. *Vocal counterpoint, with analysis of choral works of the great composers. (Half course.)*]

This course is supplementary to music 2. Exercises and analyses and short vocal compositions.

Particular attention will be given to the composition of original pieces in the various styles, i. e., for men's voices, for women's voices, for mixed chorus, and also for solo voice with accompaniment.

[*2b hf. *Medieval or modal harmony and its application. (Half-course.)*]

The object of this course is to give a clear understanding of modal harmonization as applied to the accompaniment of plain song, and to prepare the student for the intelligent study of the contrapuntal master works of Palestrina and other early composers.

The course is open to students who have a good knowledge of harmony and counterpoint, but can be taken only with the consent of the instructor.

Text-book, Niedermeyer's *Gregorian Accompaniment*.

Reference books, Dickinson's *Music in the History of the Western Church*; Haberl's *Magister Choralis*, etc.

3. *History of music from the time of Palestrina to the present day. Lectures, reading, and reports.*

This is a literary course, which does not require special technical skill; it is open to all students who have practical knowledge of vocal or instrumental music.

Instruction is given in the form of lectures. The growth of music from ancient to modern times is traced in outline, including the history of early church music, the origin and development of the modern scales and counterpoint, and the choral music of the early Flemish and Italian masters. The history of the opera, cantata, and oratorio is studied in detail.

Special attention will be given to the compositions of the great masters of the eighteenth and nineteenth centuries, and also to the tendencies in the development of music at the present day.

Vocal and instrumental works are performed in the class room. An æolian orchestrelle is also used to illustrate the work of the great composers.

The following text-books are recommended: Dickinson, *The Study of the History of Music*; Riemann's *Musical History* (Augener & Co., London); Ambros, *Geschichte der Musik*, 4 volumes (Leipsic); Von Dommer, *Musik-Geschichte* (Hamburg); Fetis, *Histoire de la Musique*, 4 volumes; Langhans, *History of Music* (Schirmer, New York); Naumann, *History of Music*, 2 volumes (London); Bonavia Hunt's *History of Music*; Rockstro, *History of Music* (Scribner & Welford, New York); Ritter's *Student's History of Music* (Ditson Company); Grove's *Dictionary of Music* (Macmillan & Co.); *Famous Composers and their Works* (J. D. Millet Company, Boston); *Life of Mozart*, Jahn, 2 volumes (Novello, London); *Life of Bach*, Spitta, 3 volumes (Novello, London); Finck, *Life of Wagner* (Scribner, New York); *Lives of Handel, Haydn, Beethoven, Schubert, Schumann, Wagner, and other great composers* (Macmillan series).

4. *Musical form, with analysis of the works of the great composers, and collateral reading.*

This course requires knowledge of harmony.

A knowledge of musical form (or thematic construction) is essential to the thorough understanding and appreciation of the works of the great composers, as embodied in their symphonies, overtures, chamber music, sonatas, etc.

A selection of the most important instrumental works of Haydn, Mozart, Beethoven, Schubert, Schumann, Mendelssohn, Chopin, Liszt, Brahms, Tchaikowski, and other modern masters will be analyzed by the students and played on the pianoforte in the class room by the instructor and others. An æolian is used in the performance of symphonic works.

The following text-book is used: Prout's *Musical Form*.

Collateral reading is required in these works: *Evolution of the Art of Music*, Parry; *The Sonata Form*, Hadow; *The Pianoforte Sonata*, Shedlock; *Beethoven and His Nine Symphonies*, Grove.

5. *Canon and fugue.*

Canon and fugue are the most advanced forms of polyphonic composition, and require a thorough knowledge of harmony and counterpoint.

The object of this course is to perfect the contrapuntal technique of the student, and to prepare him for the study of the larger and freer forms of composition.

The work will be based largely upon the fugal works of Bach and will consist of practice in writing canons of all varieties, and in the analysis and composition of fugues.

There will also be practice in the simpler forms of free music for voices and for various instruments.

Jadassohn's Canon and Fugue (Breitkopf) and Prout's Canon and Fugue are recommended as text-books.

6. *Instrumentation.*

This course requires knowledge of harmony and counterpoint.

The work of this course consists of: 1. Lectures on the characteristics and tone quality of the various orchestral instruments. 2. Analyses and descriptions of the most important (vocal and orchestral) works of Handel, Bach, Haydn, Gluck, Mozart, Beethoven, Schubert, Schumann, Mendelssohn, Von Weber, Berlioz, Liszt, Wagner, Brahms, and other modern composers. 3. Exercises in orchestration, with various combinations of instruments, strings, wind, and brass. For this purpose chorals, national airs, and short selections from the works of various masters will be used.

The services of professional musicians will be employed in the class room to exhibit the tone quality, compass, and technical peculiarities of the string and wind instruments of the modern orchestra. Original compositions scored by members of the course will be played in rehearsal by the orchestra of the New England Conservatory, so that students may hear the effects of their orchestration.

The following text-books are used: Prout's *The Orchestra*, 2 volumes; Berlioz's *Instrumentation* (Ditson Company). The following authors will also be referred to: Gevaert, *Instrumentation and Orchestration* (Paris); Marx, *Kompositions-Lehre*, Volume IV (Leipzig); Lobe, *Lehrbuch der Musikalischen Komposition*, Volume II (Leipzig); Jadassohn's *Instrumentation*.

7. *Free composition.*

This course is intended primarily for those students who are specializing in music, and can only be taken with the consent of the instructor.

It will consist of the analysis and composition of chamber and orchestral music. As some knowledge of orchestration is required, it must be preceded by, or taken in conjunction with, music 6. Arrangements have been made whereby successful compositions may be performed.

AUXILIARY SUBJECTS.

Students of music are strongly advised to strengthen their work in music by pursuing some of the courses in German, French, and Italian—on account of the important musical literature in these languages—in the history of the fine arts, and in acoustics.

DEGREES: THE DEGREE OF BACHELOR OF ARTS WITH DISTINCTION.

The degree of bachelor of arts with distinction will be awarded in two grades, *cum laude* and *magna cum laude*. The requirements in music will be as follows:

1. Eight approved courses, five of which shall be in music (including music 1, 2, 5, and 6), and three in modern languages—German, French, or Italian. Those who show that they have acquired outside the college course a thorough knowledge of harmony will not be required to take music 1. The same rule applies to music 2. Students who intend to become candidates should confer with their instructor at the opening of the sophomore year.

2. One or more special original compositions in large form must be presented to the committee before May 10 of the senior year.

HONORS.

Honors of two grades—honors and highest honors—are given at graduation for great proficiency in a department. Honors in music are given on the following terms:

1. The candidate must have taken all the courses and have passed all the examinations with distinction.

2. He must present original compositions in strict and free form.

The ability to read French and German is required of candidates for honors in music.

CURRICULUM NO. 4.

There are two general courses in the school of music, viz, (1) the collegiate course and (2) the academic course.

I. *The collegiate course.*—In this course the requirements for admission are the same as for the general courses in the college of letters and science, or for adult special students, together with such proficiency in some department of music as is stated in connection with the outlined courses of study. A graduate's diploma will be granted on the completion of this course. Four years of study are required, including the courses in musical theory, harmony (one year), and history of music, or their equivalents.

II. *The academic course.*—This course is open to persons not members of the university, and also to university students who do not desire to enter the collegiate course pursuant to graduation. Students of this course may, however, be admitted to the musical classes of the university, but will not be considered candidates for graduation or for a diploma. If, however, at any time, such students should be transferred to the collegiate course, they will, on satisfying other conditions, receive credit for studies previously taken. A certificate of excellence will be granted to worthy students of this course on examination, after not less than three years of study.

I. COLLEGIATE COURSE.

PIANO.

The courses in piano and singing have been arranged to cover a period of four years.

Applicants for admission will be expected to play music of the grade of Mozart's Sonata in D major No. 3, Peters edition; Loeschhorn, Op. 52 and Op. 66; Bach, Little Preludes.

First year.—Heller, Op. 46 and 45; Czerny, Studies in Velocity; Jensen, Op. 32; Bach, Inventions and English Suites.

Second year.—Bach, Well-Tempered Clavichord; Kullak, Octave School, Books I and II; Cramer, Studies; Czerny, Fingerfertigkeit; Marmontel, Mécanisme.

Third year.—Tausig, Studies; Kullak, Book III; Gradus ad Parnassum, first half; Czerny, Toccato; Chopin, Preludes.

Fourth year.—Moecheles, Op. 70; Gradus ad Parnassum, second half; Chopin, Etudes.

It is not supposed that a rigid course can be given which will meet the requirements of individual students, but the foregoing outline represents, in a general way, the character of each year's work. Etudes especially are named, because they indicate grade and character of requirements more clearly than can be done otherwise. On the other hand, these studies are supplemented by ample selections from classic and modern authors for use in the parlor or concert room.

Upon graduation students will be expected to play acceptably from memory selections of the grade of Chromatic Fantasia and Fugue by Bach, Sonata Op. 90 by Beethoven, Concerto in G minor (one movement) by Mendelssohn, La Fileuse by Raff, and Second Rhapsody by Liszt.

ORGAN.

No previous knowledge of organ playing is required. The student must be well grounded in piano playing, be possessed of a correct technique, and be able to read plain four-part music.

The course of study is continuous, beginning with Stainer's Organ School or Whiting's First Six Months on the Organ, and following with the larger works of Rink and Best, supplemented by special studies by Thayer, Buck, Ritter, Schneider, Volckmar, and others. Selections from Bach's organ works, Mendelssohn's sonatas, and the compositions of modern composers are used.

Careful training is given in playing church music and voluntaries, the use of stops, and the mechanism of the instrument.

VOICE.

The student must be able to read plain music and must have had an amount of training equal to the first half of Concone's Fifty Lessons, and comprising the usual technical study for the same period.

First year.—Tone placing, breathing, and phrasing; ballad singing and the sostenuto style; technical and other studies of the grade of Bonoldi's Six Vocalises, Sieber's Vocalises; Marchesi's Exercises, Op. 21, Book I.

Second year.—Concone's Fifteen Vocalises; Schubert's Manual of Vocal Technique; Marchesi's Vocalises, Op. 21, Book II; German and French songs, and easy oratorio and operatic arias, and recitatives.

Third year.—Schubert's Special Studies; Bordogni's Bravura Studies, and operatic and oratorio selections.

Fourth year.—Studies in bravura by Lamperti and Bordogni; cadenzas and larger forms of execution.

On graduation the student will be expected to sing acceptably selections (according to voice and school) from such songs and arias as He Was Despised, Angels Ever Bright and Fair, I Know That My Redeemer Liveth, and Thou Shalt Break Them, by Handel; With Verdure Clad, Rolling in Foaming Billows, and In Native Worth, by Haydn; If With All Your Hearts, It is Enough, and O Rest in the Lord, by Mendelssohn; Infelice, by Verdi; Roberto, tu che Adoro, by Meyerbeer; Una Voce and Pro Peccatis, by Rossini.

VIOLIN.

First year.—Hermann, Scale Studies; Kayser, Violin Instructor, I and II; Herbert Ries, Violin School, Part I; easy melodious solos.

Second year.—Kayser, Violin Instructor, III; Kayser, Etudes, Op. 29; Schubert, Violin School, IV; Herbert Ries, Violin School, Part III; solos by Viotti, Rode, De Beriot.

Third year.—Schradiack, Violin Technic; De Beriot, School, Part II; Etudes by Dont, Kreutzer, and Schubert.

Solos by De Beriot, Leonard, Vieuxtemps, and Wieniawski.

THEORETICAL STUDIES.

MUSICAL THEORY AND CHORAL PRACTICE.

A one-year course, twice a week, in the general theory of music, including notation, scale construction, intervals, distinctions of rhythm, etc., combined with a practical study of sight reading and choral singing.

This course is especially recommended to all students, whether of instrumental or vocal music, as furnishing a substantial foundation for all other work; it will also be found useful for those who contemplate teaching in public or similar schools.

HARMONY AND COUNTERPOINT.^a

The student must be able to read and play simple four-part music.

First year.—Review of scales, and intervals, triads, seventh chords, augmented sixth chords, modulation, synopsis of suspension and appoggiatura.

Second year.—Detailed treatment of modulation, suspension, appoggiatura, etc.; harmonizing melodies; simple strict counterpoint.

Third year.—Double counterpoint, canon, and fugue.

HISTORY OF MUSIC.

A course of lectures twice a week, extending through the year. In the first semester the lectures give a general survey of music before the Christian era and down to the eighteenth century.

The second semester is devoted to the eighteenth and nineteenth centuries.

MUSICAL COMPOSITION.

A year course, twice a week. One year of harmony is required as preparation.

II. ACADEMIC COURSE.

There are no requirements for entrance. Students are received and graded according to ability and amount of previous study. This course in all departments leads up to and overlaps the collegiate course. Students after reaching the proper stage of preparation may be transferred to the collegiate course, or may remain in the academic course, the work of the last three years being identical in both courses. But no certificate of excellence will be issued to any student who is not thoroughly fitted to enter the third year of the collegiate course.

CURRICULUM NO. 5.

Curriculum No. 5 is offered by a college for young women which maintains a well-equipped school of music in connection with its collegiate department. Credit is given in music toward the A. B. degree for work in practical music. Students are advanced from one course to the next higher only after examination before the full music faculty. It will be noted that in the course leading to the degree of associate in music subjects in the collegiate department are correlated with the music courses. These subjects must be passed by examination in the collegiate department.

ENTRANCE REQUIREMENTS.

For unconditioned admission to the freshman class in the course leading to the degree of associate in music (A. Mus.) the applicant must offer the entrance requirements in music, and seven units of preparatory work, as follows: English (3), mathematics (3), and history (1).

For conditioned admission to the freshman class in the courses leading to the associate in music degree, students must offer five units in the literary subjects outlined above. Every condition, however, must be removed by the end of the junior year.

^a The courses in counterpoint, etc., and in musical composition are inserted here under their proper headings, because they are frequently taken as electives, but they represent graduate work for the students of the school of music.

Entrance requirements in music apply only to those registering for the degree of associate in music. The preparatory course in piano, voice, violin, and organ, needed in order to enter the freshman class in the associate in music course, is described in course 1, and this preparation can be given at the college to such students as have not had it before coming.

CURRICULUM FOR THE DEGREE OF ASSOCIATE IN MUSIC.

FRESHMAN YEAR.		SOPHOMORE YEAR.	
	Hours.		Hours.
Mathematics	3	English	3
English	3	Physics	3
Piano or organ or violin or voice	6	Piano or organ or violin or voice	6
Theory	1	Theory	1
Harmony	1	Harmony	1
Ear training	1	Ear training	1
Total	15	Total	15
JUNIOR YEAR.		SENIOR YEAR.	
	Hours.		Hours.
French or German	3	French or German	3
Piano or organ or violin or voice	8	Piano or organ or violin or voice	8
History of music	1	Counterpoint	1
Theory	1	History of music	1
Harmony	1	Ensemble	1
Theme	1	Theme	1
Total	15	Total	15

COURSES OF STUDY.

Courses are offered in pianoforte, violin, organ, and voice, leading to the degree of associate in music (A. Mus.) and a purely theoretical course is offered to candidates for the degree of bachelor of music.

Candidates for the degree of associate in music must take—

- Courses 1, 2, 3, 4, 6, 7 in theory,
- Courses in academic department, and
- One of the following: Courses 1, 2, 3, 4, 5, 6 in pianoforte, or violin; 1, 2, 3, 4, 5 in solo singing; 1, 2, 3 in organ.

Candidates for the bachelor of arts degree may be given credit for six hours of music provided they complete courses 1 and 2 in theory and one of the following in practical music: Courses 1, 2, 3 in pianoforte; 1, 2, 3 in solo singing; 1, 2, 3 in violin; or 1, 2 in organ.

PIANOFORTE.

Course 1.—Technical studies: Easy Etudes, Faelten and Porter. Kinder Übungen, Book 1, Kohler. Czerny, Op. 599, Books 1 and 2, Kohler, Op. 190. Kohler, 157. Czerny, Op. 139. Duvernoy, Op. 176. Burgmuller, Op. 100. Loeschhorn, Op. 65, Books 1, 2, and 3. Loeschhorn, Op. 38, Book 1. Kohler, Op. 50. Le Couppey, Op. 26. Bertini, Op. 100. Sonatinas by Clementi, Diabelli, Merkel, Lichner, Handrock, Kuhlau. Pieces at discretion of teacher.

Course 2.—Technical studies: Kohler, Op. 242. Czerny, Op. 299, Books 1 and 2. Czerny, Op. 279. Berens, Op. 61, Books 1 and 2. Heller, Op. 46 and 47. Krause, Op. 2 and 6. Octave studies by Vogt, Wilson G. Smith, Czerny, and Turner. Bach's Little Preludes and Fugues. Sonatinas, Easy Sonatas and Variations of Haydn, Beethoven, and others. Schumann Album, Op. 68. Lyrical pieces, Op. 12, Grieg. Selections from Reinecke, Gade, and others. Mendelssohn's Songs without Words.

* This course is preparatory to entrance into the course for the associate in music degree.

Course 3.—Technical studies: Czerny, Op. 299, Books 3 and 4. Berens, Op. 61, Books 3 and 4. Heller, Op. 45 and 46. Duvernoy, Op. 120. Octave studies continued. Bach Inventions (2 parts). Haberbier, Op. 53. Lebert and Stark, Part II. Sonatas by Haydn, Mozart, Beethoven, and others. Mendelssohn's Songs Without Words. Field's Nocturnes. Selections from other composers.

Course 4.—Technical studies: Cramer, Lebert, and Stark, Part III. Czerny, Op. 740 and 40 Daily Studies. Gradus ad Parnassum. Kullak Octave Studies. Bach Inventions (three-part). Sonatas. Selections from Chopin, Mendelssohn, Grieg, Raff, and others.

Course 5.—Continuation of studies of course 4. Moscheles, Op. 70. Mendelssohn, Preludes and Studies. Bach, 48 Preludes and Fugues. Kessler Studies. Chopin, Etudes. Sonatas and selections from different composers.

Course 6.—Interpretation: This course is devoted to the perfecting of work done in previous courses and the preparation of a public recital which is required for graduation.

A postgraduate course is also offered, in which the higher and more difficult works of the great masters are studied.

SOLO SINGING.

Course 1.—Rules for Breathing and their Practical Application; Formation of Tone; Tecla Vigna Studies; Exercises by Concone, Book I and II, Op. 9 and 10; Sieber, Op. 92-97; Simple English Songs.

Course 2.—Tecla Vigna Studies; Slow Trill Portamento, etc.; Exercises, Concone, Book III and IV; Panofka Book I, II; Lutgen Daily Exercise; Songs of Medium Difficulty from English and German composers.

Course 3.—Difficult exercises in vocalization, musical embellishments; exercises, Panofka, Book III, IV; Nava, Aprile, Vaccai; song studies from the English, German, Italian, and French schools.

Course 4.—Finishing studies by Paer, Marchesi, Righini; studies of oratorio and stand-ard opera.

Course 5.—Interpretation: This course is devoted to the acquirement of repertoire and the preparation of a public recital which is required before graduation.

All pupils who are prepared to do so are required to attend regularly the choral society rehearsals and to take part in occasional public performances.

VIOLIN.

Course 1.—Elementary exercises. Scales in first position. Bowing exercises.

Studies: Ch. de Bériot, Violin School, Part I. Tours Elementary Violin School. Kayser, Op. 20, Book I. Sevcik, Method for Beginners, Op. 6.

Course 2.—Finger and bowing exercises. Scales. Kayser, Op. 20, Books II and III. Dont, Op. 37, Wohlfahrt. Hans Sitt, one hundred studies, Book I. Solos: Dancla, Airs Variés. Duets by Dancla, Mazas, etc.

Course 3.—Bowing exercises. Scales. Studies: Dont, Mazas, Casorti, Sevcik, Sitt. Solos: Alard, Dancla, de Bériot. Duets: Dancla, Pleyel.

Course 4.—Scales (three octaves). Arpeggios. Thirds. Sevcik, Violin School. Kreutzer Etudes. Fiorillo Etudes. Solos: de Bériot, Airs Variés. Concertos by Viotti, Rode. Sonatas by Handel, Mozart, and Haydn.

Course 5.—Scales (three octaves, in thirds and octaves) Arpeggios. Sevcik Violin School. Fiorillo Etudes. Rode Caprices. Solos: Svendsen, Wieniawski, Beethoven, Alard, Ries, etc. Concertos: Rode, de Bériot, Mozart, Kreutzer. Sonatas: Tartini, Mozart, Nardini, etc.

Course 6.—Scales in thirds, octaves and tenths. Arpeggios in the higher positions. Rode Caprices continued. Kreutzer Etudes continued. Campagnoli, seven divertissements. Solos: Wieniawski, Saint-Saens, Lalo, Vieuxtemps, Sarasate, Hubay, Brahms, and others. Concertos: de Bériot, Bach, Spohr, Bruch, Mendelssohn. Sonatas: Bach, Beethoven, etc.

ORGAN.

Thorough and systematic courses are given, no student being allowed to graduate until she is a thoroughly competent organist. The history and construction of the organ is taught.

For entrance to the associate in music courses in the organ department, students must have completed courses 1, 2, 3 in pianoforte, passing the examination therein.

The following courses outline the work required for graduates and include the Italian, French, German, English, and American schools of composition:

Course 1.—Schneider Pedal Studies, Bach, First Preludes and Fugues (Book VIII of Peters Edition), Mendelssohn Sonatas, Easier Concert and Church Compositions by Cappocci, Maily, Gounod, Guilmant, Du Bois, Faure, Lemaigre, Salome, Merkel, Rheinberger, Kroeger, Foote, Hammerel, Fink, Carl, and Smith.

Course 2.—Bach, Concert Preludes and Fugues, Guilmant and Widor Sonatas, Rheinberger Sonatas, and the more advanced works of the composers named in Course 1.

Course 3.—Advanced technical work and the preparation of concert repertoire.

In addition to the courses outlined above, special attention is given to accompanying, hymn playing, and the performance of all forms of church and concert music. A public recital is required before graduation.

THEORY AND HISTORY.

Course 1.—Music as a language; analogy between music and language; notation of pitch, duration, force, timbre or color; the scales; tempo, rhythms; accents; physical basis of music; vibration of strings; overtones; tempered scale; pitch; classification of vibrations.

Course 2.—The orchestra and its instruments; the string section; the wood wind; the brass; instruments of percussion; the orchestral score; musical groups; embellishments; musical form; figures and their treatment; thematic development; precursors of the sonata; the sonata; other sonata forms; symphony; contrapuntal forms; monophony, homophony, polyphony.

Courses 1 and 2 aim to give a knowledge of the structure of music and develop an appreciation of its content.

Course 3.—The scale, elements of melody; exercises in melody writing; intervals; harmonic structure; tonality; principal triads of the scale; distribution of parts; four-part harmony; connection of principal triads in four-part harmony; close and dispersed harmony; inversion of triads; chord of dominant seventh; chord of ninth and inversions; harmonizing melodies.

Course 4.—Continuation of work of course 3; minor and diminished seventh on leading tone; diminished triad; secondary triads; modulation; passing notes; suspensions; chromatically altered chords. The aim of courses 3 and 4 is to give thorough understanding of the grammatical structure of music and to enable students to harmonize themes with facility.

Course 5.—Counterpoint: The study of contrapuntal forms; contrapuntal treatment of voice parts; practical work at keyboard and written exercises.

Course 6.—Music of antique races; first Christian centuries—Hucbald, Guido, Franco, etc.; minnesingers, meistersingers, etc.; epoch of the Netherlands; Palestrina and the Roman schools; Orlando di Lasso and the Northern Italian masters; the Renaissance and rise of opera and oratorio; the German chorale; English madrigal writers; instruments and instrumental music in sixteenth and beginning of seventeenth centuries.

Course 7.—Bach and Handel, Haydn, Mozart, and Beethoven; the romantic composers; dramatic music in Italy, France, and Germany; Wagner and his music dramas; composers of last twenty-five years.

FOR DEGREE OF BACHELOR OF MUSIC.

Evidence must be produced of—

(a) Having received a good general education.

(b) Having employed at least four years in the study and practice of music.

The candidate will be required to pass three examinations, separated by intervals of not less than one year.

The first examination will consist of harmony in not more than four parts. The second examination will be in harmony and counterpoint in not more than five parts, canon and fugue in not more than four parts. Before entering for the third examination, the candidate must compose an exercise containing five-part harmony and fugue (in at least four parts), and canon, with an accompaniment for organ, piano, or string band, sufficiently long to require twenty minutes in performance, and this exercise must be approved by the faculty in music.

The third (final) examination will consist of harmony, counterpoint, canon, fugue (in five parts), with double counterpoint, history of music, form in composition, instrumentation, figured bass reading at sight, and the analysis of the full score of some selected work.

ENTRANCE REQUIREMENTS.

The following entrance requirements, announced by a leading college for women, which grants credit, under restrictions, in both practical and theoretical music at entrance and toward a degree, illustrate the demands made by colleges which view music as a proper subject for inclusion in the general educational scheme.

ELEMENTARY REQUIREMENT.

The elementary in music may be either, A, harmony, or B, a combination of a less advanced requirement in theory, with a practical study—piano, voice, violin, or other orchestral instrument.

A. *Harmony*.—The examination will be adapted to the proficiency of those who have had one year's systematic training, with at least three lessons a week or its equivalent. The candidate should have acquired—

(1) The ability to harmonize, in four vocal parts, simple melodies of not fewer than eight measures, in soprano or in bass. These melodies will require a knowledge of triads and inversions, of diatonic seventh chords and inversions, in the major and minor modes; and of modulation, transient or complete, to nearly related keys.

(2) Analytical knowledge of ninth chords, all nonharmonic tones, and altered chords (including augmented chords). [Students are encouraged to apply this knowledge in their harmonization.]

It is urgently recommended that systematic ear training (as to interval, melody, and chord) be a part of the preparation for this examination. Simple exercises in harmonization at the pianoforte are recommended. The student will be expected to have a full knowledge of the rudiments of music, scales, intervals, and staff notation, including the terms and expression marks in common use.

B. The following requirement in theory combined with piano, voice, violin, or other orchestral instrument:

The examination in theory will be adapted to the proficiency of those who have had one year's systematic training, with at least one lesson a week or its equivalent. The candidate should have acquired:

(1) A knowledge of the rudiments of music, scales, intervals, and staff notation, including the terms and expression marks in common use; (2) the ability to analyze the harmony and form of hymn tunes and simplest pieces for the pianoforte, involving triads and the dominant seventh chord and their inversions, passing tones, and modu-

lation to nearly related keys; (3) the ability to harmonize, on paper, in four vocal parts, melodic fragments involving the use of triads and the dominant seventh chord and their inversions, in major keys.

After 1906 the candidate must also meet the following requirements in ear training. To name, as played by the examiner, intervals involving tones of the major scale, the three principal triads and the dominant seventh chord in fundamental position, and the authentic, plagal, and deceptive [*v* (or *v'*) to *vi*] cadences; to write a diatonic, major melody of not more than four measures in simple time, involving half, quarter, eighth, and dotted notes (the melody to be played, in its entirety, three times by the examiner).

1. *Piano*.—A practical knowledge of various kinds of touch; the ability to play scales, major and minor, in simple and canon forms, in sixteenth notes (at metronome speed, ♩=100), and three-toned and four-toned arpeggios in sixteenth notes (at metronome speed ♩=75), the ability to play, with due regard to the tempo, fingering, phrasing, and expression, the studies by Hasert, Op. 50, Book 1; Haydn's Sonata in E minor (Peter's Edition, No. 2; Schirmer Edition, No. 2), the Theme and Variations from Mozart's Sonata in A major (Peter's Edition, No. 12; Schirmer Edition, No. 9), Mendelssohn's Songs without Words, Nos. 19 and 49, and Schumann's Romance in F sharp major (Op. 28, No. 2); the ability to play at sight chorales and such pieces as the first twelve numbers of Schumann's *Jugend-Album* (Op. 68). [A candidate may offer equivalents for the studies and pieces mentioned, on the approval of the department.]

2. *Voice*.—The ability to sing, with due regard to intonation, tone quality, expression, and enunciation, the vocalises of Concone, Op. 9, and not fewer than six of the following songs (preferably in the English version): Schubert, Who is Sylvia? and Hark, Hark, the Lark; Mendelssohn, Morgengruss; Schumann, An den Sonnenschein; Brahms, Der Sandmann; Franz, Widmung; Grieg, Das alte Lied; Chopin, Mâchchens Wunsch; Massenet, Ouvre tes beaux yeux; Paine, *Matin Song*; the ability to play pianoforte accompaniments of the grade of Concone, Op. 9; the ability to sing at sight music of the grade of hymn tunes by Barnby, Dykes, and Stainer, and of the studies in Abt's *Vocal Tutor*, Part III. The student must also give evidence of having an accurate ear and of having laid a good foundation in the development of the voice. [A candidate may offer equivalents for the songs mentioned, on the approval of the department.]

3. *Violin*.—The ability to play, with due regard to bowing, fingering, tone, intonation, and expression, such studies as those by Dont (Op. 37), Mazas (Op. 36), and Kreutzer, and such pieces as the moderately difficult solos of Spohr, Wieniawski, Godard, and Ries; the ability to read at sight such music as the second violin parts of the string quartets of Haydn and Mozart.

4. Students wishing to be examined in the playing of other instruments should correspond with the music department.

NOTE.—Students considering submitting music for entrance to college are advised to correspond with the department, stating in detail what their preparation has been in theory and especially in the practical subjects. In the latter students must give evidence of thorough foundation work in the technique of the piano, voice, violin, or other instrument, in addition to being able merely to play or sing the actual requirement mentioned.

Certificates will not be accepted in music.

CORRELATION OF MUSIC AND NONMUSIC COURSES.

In the correlation of music and nonmusic courses, colleges and universities lead. The attitude assumed by independent schools of music appears to be similar to that taken by schools of technology

in general education; they take the position that they are professional training schools, and naturally concentrate their efforts on turning out composers, pianists, singers, theorists, and pedagogues. They do not consider nonmusical subjects to be an essential part of their curricula. Yet in the best of these schools there is shown a recognition of the value of broader culture and an inclination to include such subjects as will increase the efficiency of their graduates. The New England Conservatory of Music has recently established a reciprocal relation with Harvard University, through which students in the conservatory can attend courses in English, French, and German literature, English composition, fine arts, physics (especially acoustics), and public speaking. In college and university music departments gratifying progress has been made in the correlation of courses with those of other departments, demanding, in a very considerable number of institutions, a greater or less amount of collegiate work as a part of the graduate course in music. Reciprocally, music as an elective is receiving credit as a subject in baccalaureate courses.

MANNER OF PROMOTING STUDENTS FROM GRADE TO GRADE.

The manner of grading students and of determining their advancement from one grade to the next is significant as indicating to what extent system and accuracy in determining the standing of music students are attained. This has been a decided obstacle in the way of the admission of music to courses leading to the baccalaureate degree. Perhaps no single disclosure by the investigation is more encouraging than this. While the advancement of students still rests in many cases with the instructor, or with the instructor and director of the department jointly, the development of a system of accurate grade marks, based on examination and recitation, gives promise of the eventual setting up of such standards as will result in the unifying of educational effort.

The following tables give the per cent of schools giving examinations in theoretical and practical music; of schools giving written, oral, and actual performance tests; of schools recording by marks the grade or quality of a student's work; and of schools in which the instructor or faculty determines passing grade:

Per cent of institutions giving examinations yearly or oftener.

Class of institutions.	In theoretical subjects.	In practical music.	Written.	Oral.	Performance test.
Independent schools of music.....	71	65½	66½	50	55½
Colleges and universities.....	75	66½	50	25	20
Colleges for women.....	100	70	70	33½	50
Normal schools.....	82	70	78½	66½	56½
Secondary schools.....	80	20	66½	50	50

Per cent of institutions having a system of marks for recording grades and determining passing grade.

Class of institutions.	Recorded in all subjects.	Passing grade determined by—	
		Instructor.	Faculty.
Independent schools of music.....	58	27	73
Colleges and universities.....	80	80	24
Colleges for women.....	70	50	50
Normal schools.....	76½	77	23
Secondary schools.....	80	50	50

These figures are based on 207 replies to the second questionnaire. From the per cent of schools giving actual performance tests, it would appear that the opinion that a sufficiently accurate and systematic grading of work in practical music can not be done is losing ground, and encouragement is given the belief that there may develop a system of grading in practical music which will satisfy educators and remove one of the great obstacles to the admission of applied music to general educational courses.

EDUCATIONAL QUALIFICATIONS OF MUSIC STUDENTS.

There appears to be a growing purpose upon the part of departments of music in colleges and universities to demand a certain amount of general educational qualification from those who wish to enter graduate courses in music. In this connection, the following table gives the per cent of music students in 595 institutions who have completed a high school course of at least three years:

<i>Class of institutions.</i>	<i>Per cent.</i>
Independent schools of music.....	43
Colleges and universities.....	56
Colleges for women.....	57½
Normal schools.....	56½
Secondary schools.....	22½

The time devoted to the study of music (not including preparation) is shown in the following table, which gives the per cent of students devoting less than five hours, more than five hours but less than ten, and more than ten hours per week to recitation.

Class of institutions.	Less than 5 hours.	More than 5 but less than 10 hours.	More than 10 hours.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Independent schools of music.....	66½	22½	11½
Colleges and universities.....	52	+32	+14
Colleges for women.....	61½	32½	6½
Normal schools.....	65	+24	+9
Secondary schools.....	66½	25	+7

PROPERTY DEVOTED TO MUSICAL INSTRUCTION.

The questions relating to finances were not answered by 348 of the 595 schools returning statistics, hence the statements of amount of

property devoted to musical purposes and of yearly expenditures for music instruction are far from complete. They are significant, nevertheless, and if increased in proper proportion by a full statement would show a very large investment in music education. It should be remembered also that these figures refer only to organized schools, the immense sums expended on private instruction being unknown.

Libraries and museums.—In all, 39,538 volumes, valued at \$62,120, are reported by the 595 institutions. In several instances private libraries are reported as at the service of students. No museums are reported.

Property devoted to musical instruction.

Class of institutions.	Value of buildings and grounds.		Value of instruments, apparatus, and furniture.		Permanent endowment.		Volumes in library.		Value of library.		Expense for rent.	
	Schools reporting.	Amount.	Schools reporting.	Amount.	Schools reporting.	Amount.	Schools reporting.	Number.	Schools reporting.	Amount.	Schools reporting.	Amount.
Independent schools of music.....	10	\$578,110	29	\$159,700	4	\$827,000	21	23,188	18	\$22,925	26	\$53,346
Colleges and universities.....	31	1,281,600	64	319,902	1	46,000	35	18,164	33	19,222	19	13,243
Colleges for women....	9	243,000	23	163,609	2	17,500	15	16,088	13	13,225	3	1,840
Normal schools.....	8	153,750	51	208,865	1	100,000	22	3,348	20	3,523	4	9,675
Secondary schools.....	8	153,750	51	208,865	1	100,000	22	3,348	20	3,523	4	9,675
Total.....	58	2,256,460	167	852,076	8	990,500	93	60,788	84	58,895	52	78,104

Annual receipts from instruction in music.

Class of institutions.	Interest and rents.		Public appropriation.		Private gifts.		Concerts.		Other sources.		Students' fees.		Total.
	Schools reporting.	Amount.	Schools reporting.	Amount.	Schools reporting.	Amount.	Schools reporting.	Amount.	Schools reporting.	Amount.	Schools reporting.	Amount.	
Independent schools of music.....	6	\$47,053	.....	.....	3	\$5,578	9	\$8,375	5	\$7,000	28	\$529,563	\$597,569
Colleges and universities.....	8	18,825	4	\$5,800	1	200	30	19,426	10	14,972	82	440,380	499,693
Colleges for women....	3	1,450	3	4,550	3	2,410	7	2,410	1	140	28	185,456	194,006
Normal schools.....	6	1,979	4	10,050	2	176	8	1,322	4	1,448	53	111,848	126,823
Secondary schools.....	6	1,979	4	10,050	2	176	8	1,322	4	1,448	53	111,848	126,823
Total.....	23	69,307	8	15,940	9	10,504	54	31,533	20	23,560	191	1,267,247	1,418,091

III.—STATISTICAL TABLES.

Statistics of the institutions replying to the first questionnaire are given in the tables which follow. Tables 1, 2, 3, 4, and 5 summarize Tables 6, 7, 8, 9, and 10, which give in detail the number of schools, instructors, and students, and the number of graduates and of students receiving certificates during the last five years. The geographical distribution of the institutions is also shown.

TABLE 1.—Summary of the statistics of independent schools of music, showing the number of instructors, students, and graduates, and number of students receiving certificates.

	Schools reporting.	Instructors.			Students enrolled.			Graduates in last 5 years.	Students not graduates receiving certificates in last 5 years.
		Male.	Female.	Total.	Male.	Female.	Total.		
United States.....	61	306	271	607	2,527	10,860	17,122	1,962	1,971
North Atlantic Division.....	28	133	115	248	1,218	3,911	6,329	662	1,033
South Atlantic Division.....	1	20	28	48			1,200		
South Central Division.....	4	8	14	22	49	382	409	30	30
North Central Division.....	27	145	114	289	1,230	6,297	8,874	1,270	918
Western Division.....	1				30	280	310		
North Atlantic Division:									
Maine.....									
New Hampshire.....									
Vermont.....									
Massachusetts.....	2	11	6	17	243	822	1,065	42	20
Rhode Island.....									
Connecticut.....	1	2	5	7	18	109	127		
New York.....	16	90	59	149	564	1,294	2,558	414	644
New Jersey.....	1	5		5	20	60	80		
Pennsylvania.....	8	25	45	70	373	1,626	2,499	206	369
South Atlantic Division:									
Delaware.....									
Maryland.....	1	20	28	48			1,200		
District of Columbia.....									
Virginia.....									
West Virginia.....									
North Carolina.....									
South Carolina.....									
Georgia.....									
Florida.....									
South Central Division:									
Kentucky.....									
Tennessee.....	2	2	2	4	15	55	68	9	
Alabama.....									
Mississippi.....									
Louisiana.....									
Texas.....	2	6	12	18	34	307	341	21	20
Arkansas.....									
Oklahoma.....									
Indian Territory.....									
North Central Division:									
Ohio.....	6	38	12	50	216	1,382	1,598	199	32
Indiana.....	1			30				90	20
Illinois.....	11	61	52	113	484	2,786	4,617	688	472
Michigan.....	3	16	24	40	203	1,302	1,505	106	69
Wisconsin.....	1	11	8	19	200	400	600	80	305
Minnesota.....	1	9	9	18	10	250	260	102	
Iowa.....									
Missouri.....	2	6	6	12	95	93	188		
North Dakota.....									
South Dakota.....									
Nebraska.....									
Kansas.....	1	4	3	7	22	84	106	5	10
Western Division:									
Montana.....									
Wyoming.....									
Colorado.....									
New Mexico.....									
Arizona.....									
Utah.....									
Nevada.....									
Idaho.....									
Washington.....									
Oregon.....									
California.....	1				30	280	310		

TABLE 2.—Summary of the statistics of music departments of universities and colleges, showing the number of instructors, students, and graduates in music, and number of students receiving certificates in music.

	Insti- tutions report- ing.	Instructors in music.			Students enrolled in departments of music.			Gradu- ates in music in last 5 years.	Students not gradu- ates re- ceiving certifi- cates in music in last 5 years.
		Male.	Fe- male.	Total.	Male.	Fe- male.	Total.		
United States.....	151	336	344	680	5,257	12,788	18,971	1,652	633
North Atlantic Division.....	23	88	34	122	1,253	2,063	3,316	353	45
South Atlantic Division.....	15	15	25	40	356	496	912	73	6
South Central Division.....	16	21	50	71	144	987	1,584	137	29
North Central Division.....	78	173	192	365	3,005	7,866	11,284	969	538
Western Division.....	19	39	43	82	499	1,376	1,875	120	15
North Atlantic Division:									
Maine.....									
New Hampshire.....	2	4		4	88		88		
Vermont.....									
Massachusetts.....	4	9		9	300	90	390		
Rhode Island.....									
Connecticut.....	1	10		10	34	58	92	40	33
New York.....	6	27	8	35	536	938	1,474	51	6
New Jersey.....									
Pennsylvania.....	10	38	26	64	295	977	1,272	262	6
South Atlantic Division:									
Delaware.....									
Maryland.....	2	2	1	3	23	10	33	2	
District of Columbia.....									
Virginia.....	3	2	7	9	114	44	218	13	0
West Virginia.....	1	1	1	2	6	43	49	24	1
North Carolina.....	5	8	5	13	174	185	339	14	1
South Carolina.....	1		2	2	6	32	38	3	
Georgia.....	1		2	2	2	39	41	0	4
Florida.....	2	2	7	9	31	163	194	17	
South Central Division:									
Kentucky.....	1		5	5	3	90	93		4
Tennessee.....	4	3	10	13	58	267	325	23	13
Alabama.....									
Mississippi.....									
Louisiana.....	1	2		2	42		42		
Texas.....	4	9	14	23	16	271	697	15	12
Arkansas.....	4	3	14	17	16	331	390	54	
Oklahoma.....	1	2	5	7				45	
Indian Territory.....	1	2	2	4	9	28	37		
North Central Division:									
Ohio.....	14	25	28	53	271	1,363	1,634	245	26
Indiana.....	7	12	14	26	343	389	732	40	1
Illinois.....	13	42	43	85	596	1,442	2,451	250	416
Michigan.....	4	7	11	18	47	248	295	32	7
Wisconsin.....	5	13	18	31	111	507	618	78	
Minnesota.....	3	4	3	7	43	170	213	12	
Iowa.....	9	20	19	39	313	1,007	1,320	82	1
Iowa.....	9	20	19	39	313	1,007	1,320	82	1
Missouri.....	8	11	14	25	208	439	647	47	6
North Dakota.....									
South Dakota.....	3	6	3	9	70	230	300	25	16
Nebraska.....	5	18	20	38	245	992	1,237	100	46
Kansas.....	7	15	19	34	758	1,079	1,837	58	19
Western Division:									
Montana.....	2	3	3	6	26	62	88	8	
Wyoming.....									
Colorado.....	2	2	3	5	6	109	115		
New Mexico.....	1		2	2	17	42	59	6	
Arizona.....									
Utah.....	1	4	1	5	138	187	325		
Nevada.....	1		1	1		20	20	57	
Idaho.....	1	3	2	5	9	59	68	4	
Washington.....	3	9	12	21	90	406	496	11	6
Oregon.....	4	8	10	18	78	243	321	9	4
California.....	4	10	9	19	135	248	383	25	5

TABLE 3.—*Summary of statistics of music departments in colleges for women, showing the number of instructors, students, and graduates in music, and number of students receiving certificates in music.*

	Institutions reporting.	Instructors in music.			Students enrolled in departments of music.			Graduates in music in last 5 years.	Students not graduates receiving certificates in music in last 5 years.
		Male.	Female.	Total.	Male.	Female.	Total.		
United States.....	57	86	208	294	210	7,562	7,772	491	323
North Atlantic Division...	9	20	24	44	84	1,547	1,631	74	1
South Atlantic Division...	18	25	72	97	29	2,077	2,106	121	227
South Central Division...	16	13	57	70	49	1,833	1,882	91	12
North Central Division...	13	21	52	73	48	1,325	1,373	205	53
Western Division.....	1	7	3	10	.....	780	780	.....	.....
North Atlantic Division:									
Maine.....	1	1	3	4	80	141	221	11	.....
New Hampshire.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vermont.....	.....	.....	.....	.....	.....	572	572	4	1
Massachusetts.....	4	14	12	26	.....	.....	.....	.....	.....
Rhode Island.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Connecticut.....	.....	.....	.....	.....	.....	677	677	30	.....
New York.....	2	4	3	7	.....	.....	.....	.....	.....
New Jersey.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pennsylvania.....	2	1	6	7	4	157	161	29	.....
South Atlantic Division:									
Delaware.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Maryland.....	3	6	8	14	3	255	258	17	.....
District of Columbia...	1	.....	1	1	.....	14	14	.....	.....
Virginia.....	5	6	20	26	13	633	646	41	127
West Virginia.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
North Carolina.....	3	5	13	18	9	499	508	21	14
South Carolina.....	3	5	14	19	4	318	322	13	5
Georgia.....	3	3	16	19	.....	358	358	29	81
Florida.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
South Central Division:									
Kentucky.....	4	3	10	13	24	275	299	18	.....
Tennessee.....	3	5	11	16	20	358	378	13	.....
Alabama.....	2	2	13	15	0	375	375	28	10
Mississippi.....	1	1	9	10	5	470	475	.....	.....
Louisiana.....	3	0	5	5	.....	95	95	5	.....
Texas.....	2	2	6	8	.....	195	195	15	.....
Arkansas.....	1	.....	3	3	0	65	65	12	2
Oklahoma.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Indian Territory.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
North Central Division:									
Ohio.....	3	6	12	18	7	257	264	26	0
Indiana.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Illinois.....	3	5	9	14	23	274	297	20	1
Michigan.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wisconsin.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Minnesota.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Iowa.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Missouri.....	7	10	31	41	18	794	812	159	82
North Dakota.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
South Dakota.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nebraska.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kansas.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Western Division:									
Montana.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wyoming.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Colorado.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Mexico.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Arizona.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Utah.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nevada.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Idaho.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Washington.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oregon.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
California.....	1	7	3	10	.....	780	780	.....	.....

TABLE 4.—Summary of the statistics of the music departments of normal schools, showing the number of instructors, students, and graduates in music, and number receiving certificates in music.

	Schools reporting.	Instructors in music.			Students enrolled in departments of music.			Graduates in music in last 5 years.	Students not graduates receiving certificates in music in last 5 years.
		Male.	Female.	Total.	Male.	Female.	Total.		
United States.....	98	87	138	225	3,215	12,385	18,994	653	86
North Atlantic Division.....	28	21	39	60	342	3,878	6,890	249	25
South Atlantic Division.....	15	6	28	34	507	1,848	2,355	12	15
South Central Division.....	12	8	22	30	388	1,143	1,531	18	.....
North Central Division.....	38	49	41	90	1,701	4,967	7,422	336	46
Western Division.....	5	3	8	11	277	549	826	38	.....
North Atlantic Division:									
Maine.....	2	1	2	3	66	260	326	.....	.....
New Hampshire.....	1	1	1	1	1	102	103	.....	.....
Vermont.....	1	1	1	2	2	68	70	.....	.....
Massachusetts.....	4	2	3	5	10	245	255	.....	.....
Rhode Island.....	1	1	1	1	.....	60	60	.....	.....
Connecticut.....	2	1	2	3	2	258	260	.....	25
New York.....	9	5	15	20	116	2,253	5,009	199	.....
New Jersey.....	1	1	1	1	.....	100	100	.....	.....
Pennsylvania.....	7	8	16	24	145	532	677	50	.....
South Atlantic Division:									
Delaware.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Maryland.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
District of Columbia.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Virginia.....	2	1	3	4	465	890	1,355	.....	.....
West Virginia.....	2	.....	2	2	7	47	54	.....	.....
North Carolina.....	4	2	6	8	4	413	417	.....	.....
South Carolina.....	3	1	10	11	6	260	266	.....	.....
Georgia.....	4	2	7	9	25	238	263	12	15
Florida.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
South Central Division:									
Kentucky.....	1	1	1	2	3	13	16	.....	.....
Tennessee.....	1	1	.....	1	36	126	162	.....	.....
Alabama.....	4	1	7	8	74	203	277	1	.....
Mississippi.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Louisiana.....	2	.....	7	7	.....	188	188	.....	.....
Texas.....	1	.....	1	1	164	371	535	.....	.....
Arkansas.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Oklahoma.....	3	5	6	11	111	242	353	17	.....
Indian Territory.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
North Central Division:									
Ohio.....	6	5	7	12	62	598	660	79	.....
Indiana.....	4	10	6	16	325	890	1,205	18	0
Illinois.....	5	5	2	7	195	623	1,148	.....	.....
Michigan.....	2	7	5	12	26	234	260	119	.....
Wisconsin.....	6	3	4	7	203	594	1,221	.....	.....
Minnesota.....	3	4	2	6	52	257	309	26	.....
Iowa.....	1	1	1	2	12	35	47	.....	16
Missouri.....	6	7	8	15	743	1,269	2,012	74	30
North Dakota.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
South Dakota.....	1	.....	1	1	2	57	59	.....	.....
Nebraska.....	2	4	1	5	45	245	290	.....	.....
Kansas.....	2	3	4	7	36	175	211	20	.....
Western Division:									
Montana.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wyoming.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Colorado.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Mexico.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Arizona.....	1	3	3	6	13	43	56	38	.....
Utah.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nevada.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Idaho.....	1	.....	1	1	15	93	108	.....	.....
Washington.....	2	.....	3	3	229	273	502	.....	.....
Oregon.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
California.....	1	.....	1	1	20	140	160	.....	.....

TABLE 5.—Summary of the statistics of the music departments of secondary schools, showing the number of instructors, students, and graduates in music, and number of students receiving certificates in music.

	Schools reporting.	Instructors in music.			Students enrolled in departments of music.			Graduates in music in last 5 years.	Students not graduates receiving certificates in music in last 5 years.
		Male.	Female.	Total.	Male.	Female.	Total.		
United States.....	228	230	470	700	3,597	10,903	14,500	634	636
North Atlantic Division...	87	102	182	284	1,658	4,473	6,131	193	187
South Atlantic Division...	34	32	69	101	274	1,769	2,043	108	78
South Central Division...	35	23	49	72	329	1,370	1,699	89	45
North Central Division...	61	61	136	197	1,207	2,771	3,978	218	177
Western Division.....	11	12	34	46	129	520	649	26	149
North Atlantic Division:									
Maine.....	4	5	4	9	65	85	150	4	39
New Hampshire.....	8	5	10	15	132	405	537	5	
Vermont.....	2	1	2	3	17	58	75	11	
Massachusetts.....	17	29	38	67	270	787	1,057	40	
Rhode Island.....	2	3	1	4	25	19	44		
Connecticut.....	8	5	20	25	13	92	105	37	
New York.....	23	27	54	81	341	1,357	1,698	45	91
New Jersey.....	8	7	22	29	80	461	541	9	20
Pennsylvania.....	15	20	31	51	715	1,209	1,924	42	37
South Atlantic Division:									
Delaware.....									
Maryland.....	4	3	2	5	64	234	298	25	
District of Columbia...	5	12	11	23		243	243	9	3
Virginia.....	9	3	18	21	54	330	384	9	32
West Virginia.....	5	5	13	18	78	448	526	34	10
North Carolina.....	3	5	11	16	47	223	270	2	33
South Carolina.....	1		2	2	3	30	33	3	
Georgia.....	4	3	6	9	3	115	118	20	
Florida.....	3	1	6	7	25	146	171	6	
South Central Division:									
Kentucky.....	8		10	10	19	299	318	3	
Tennessee.....	4	1	3	4	15	133	148		
Alabama.....	5	4	12	16	45	289	334	20	10
Mississippi.....	3		4	4	4	67	71	2	
Louisiana.....									
Texas.....	6	11	8	19	162	242	404	31	13
Arkansas.....	5	3	5	8	42	126	168	32	18
Oklahoma.....	2	3	5	8	25	167	192	0	4
Indian Territory.....	2	1	2	3	17	47	64	1	
North Central Division:									
Ohio.....	8	15	17	32	190	377	567	22	14
Indiana.....	2	1	2	3	5	31	36	2	
Illinois.....	12	8	32	40	55	468	523	23	2
Michigan.....	4		17	17	20	405	425	33	
Wisconsin.....	10	15	12	27	268	288	556	28	
Minnesota.....	2	3	7	10	53	82	135		
Iowa.....	6	3	18	21	69	351	420	34	12
Missouri.....	10	12	16	28	128	348	476	45	
North Dakota.....									
South Dakota.....	2	1	3	4	136	88	224		
Nebraska.....	2		5	5	28	71	99	8	131
Kansas.....	3	3	7	10	255	262	517	23	18
Western Division:									
Montana.....									
Wyoming.....									
Colorado.....	1	2	1	3	17	18	35		
New Mexico.....									
Arizona.....									
Utah.....									
Nevada.....									
Idaho.....									
Washington.....	2	3	2	5	59	54	113		
Oregon.....	1	1	5	6		72	72		
California.....	7	6	26	32	53	376	429	26	149

TABLE 6.—Statistics of independent schools of music.

State and post-office.	Name of institution.	Director of music.	In- cor- pora- ted.	Instructors in music.				Students enrolled in department of music.			Shortest period for which stu- dents are received.	Per cent of students com- pleting high school course of 3 years or more.	Per cent of students devot- ing less than 5 hours per week to music.	Per cent devoting more than 5 but less than 10 hours per week to music.	Per cent devoting 10 hours or more per week to music.	Graduates in last 5 years.	Students not graduates re- ceiving certificates in last 5 years.	Number of volumes in li- brary.	Value of library.
				Male.	Female.	Total.		Male.	Female.	Total.									
CALIFORNIA.																			
San Jose.....	King Conservatory of Mu- sic.	T. Loui King.....	Yes.	.....	.....	.....	30	280	310	No limit.	.....	.....	.....	.....	.....	.....	.....	.....	.....
CONNECTICUT.																			
Hartford.....	School of Music.....	Willis E. Bacheller...	Yes.	2	5	7	18	109	127	17 weeks.	50	.....	.....	.....	.....	.....	.....	.....	.....
ILLINOIS.																			
Chicago.....	American Conservatory of Music.	John J. Hartsaedt....	Yes.	.....	.....	.....	140	1,760	1,900	10 weeks.	90	.....	.....	.....	.....	230	430	.....	.....
Chicago (523 S. West- ern avenue).	Chicago Conservatory of Fine Arts.	C. Frederick Kellogg.	Yes.	2	2	4	33	10	43	3 months	100	.....	.....	.....	.....	22	.....	.....	.....
Chicago (Clark street)	Bush Temple Conservatory.	Kenneth M. Bradley.	Yes.	8	3	11	100	550	650	10 weeks.	50	.....	.....	.....	.....	.....	.....	.....	.....
Chicago (Kimball Hall).	Hinsaw Conservatory.	Dr. W. W. Hinsaw...	No.	4	6	10	100	250	350	do.	60	.....	.....	.....	.....	.....	.....	.....	.....
Chicago (243 Wabash avenue).	Leffingwell Violin School...	W. W. Leffingwell...	No.	9	1	10	.....	.....	.....	do.	50	.....	.....	.....	.....	3	4	50	.....
Chicago (243 Wabash avenue).	Joseph Vilim American Vi- olin School.	Joseph Vilim.....	Yes.	6	2	8	40	20	60	5 weeks.	100	.....	.....	.....	.....	5	38	25	\$10
Chicago (203 Michigan boulevard).	Walter Spry Piano School..	Walter Spry.....	No.	4	1	5	5	85	90	10 weeks.	20	50	50	.....	.....	.....	.....	.....	.....
Chicago (Kimball Hall).	Chicago Conservatory.....	Walton Perkins.....	Yes.	17	8	25	(?)	(?)	647	1 term.	100	.....	.....	.....	.....	408	.....	.....	.....
Chicago (Lake View).	Chicago Piano School.....	Charles E. Watt.....	No.	5	22	27	(?)	(?)	700	10 weeks.	75	.....	.....	.....	.....	.....	.....	.....	.....
Chicago.....	G. Guttentberger's Violin School.	G. Guttentberger.....	No.	1	1	2	20	10	30	.....	100	.....	.....	.....	.....	.....	.....	.....	.....
Chicago.....	Prof. Oscar Tunk's School of Music.	Oscar Tunk.....	No.	3	1	4	21	51	72	10 weeks.	6	.....	.....	.....	.....	20	.....	.....	.....
Zion City.....	Zion City Conservatory of Music and Art.	Hyland E. Wilson....	No.	2	5	7	25	50	75	do.	10	97	.....	.....	.....	.....	.....	.....	.....

TABLE 6.—*Statistics of independent schools of music—Continued.*

State and post-office.	Name of institution.	Director of music.	In- cor- por- ated.	Instructors in music.			Students enrolled in department of music.			Shortest period for which stu- dents are received.	Per cent of students com- pleting high school course of 3 years or more.	Per cent of students devot- ing less than 5 hours per week to music.	Percent devoting more than 5 but less than 10 hours per week to music.	Per cent devoting 10 hours or more per week to music.	Graduates in last 5 years.	Students not graduates re- ceiving certificates in last 5 years.	Number of volumes in li- brary.	Value of library.
				Male.	Female.	Total.	Male.	Female.	Total.									
INDIANA.	Indianapolis Conservatory of Music.	Edgar M. Cavley.....		30						10 weeks..	50	100			90	30		
	Wichita Conservatory of Music.	Frank A. Power.....	Yes.	4	3	7	22	84	106	10 weeks..	60	80	20		5	10		
MARYLAND.	Peabody Institute Conserv- atory of Music.	Harold Randolph.....	Yes.	20	28	48			1,200	4 months								
MASSACHUSETTS.	Faelten Pianoforte School..	Carl Faelten.....	No..	6	4	10	193	747	940	10 lessons					42	20		
	Worcester County Music School.	Edward L. Sumner ..	No..	5	2	7	50	75	125	1 term....		95	5					
MICHIGAN.	St. Thomas Conservatory of Music.	Sister M. Angela.....	No..		2	2	78	72	150	1 quarter.	10							
	Detroit Conservatory of Music.	Francis L. York.....	Yes.				50	805	855	5 weeks..	15	80	15	5	57	31		
	Michigan Conservatory of Music.	Frederic L. Abel.....	Yes.	16	22	38	75	425	500	10 weeks..	60	100			49	38		
MINNESOTA.	The Johnson School of Music.	Gustavus Johnson.....	No..	9	9	18	10	250	260	10 weeks..		100			102			
MISSOURI.	Kirchels Music School.....	O. A. Kirchels.....	No..	1		1	55	8	63		100							
	Becker Bros. Conservatory of Music.	Lucien E. Becker.....	No..	5	6	11	40	85	125	1 term....	60							
NEW JERSEY.	Hasbrouck School of Music.	Gustav L. Becker.....	Yes.	5		5	20	60	80	10 weeks..	50	100						

NEW YORK.														
Brooklyn (98 Green avenue).....	A. Arnold's Music Studio.....	No..	1	2	10	40	50	.....	100	.....	.....	14	.....
Brooklyn (533 Franklin avenue).....	Brooklyn Conservatory of Music.....	No..	6	4	10	68	146	214	10 weeks	.....	354	630	2,000 \$5,000
Brooklyn (542 State street).....	Grand Italian Conservatory of Music.....	No..	4	3	7	10	35	45	.....do	100	.....	.....	.....
Brooklyn (108 Montague street).....	The Master School of Music.....	Yes	4	6	10	.....	29	29	1 session	100	.....	.....	.....
Brooklyn (115 Miller avenue).....	Louis H. Stagg's Studio of Music.....	No..	1	.....	1	15	35	50	.....	.....	.....	.....	.....
Cortland.....	Cortland Conservatory of Music.....	Yes	4	5	9	177	488	665	20 weeks	.....	.....	.....	.....
Lockport.....	Frank F. Shearer's School of Music.....	No..	2	2	4	26	71	97	.....	.....	.....	.....	.....
New York (53 Fifth avenue).....	Institute of Musical Art of the City of New York.....	Yes	36	20	56	.....	.....	700	.....	50	60	2	1,500
New York (34 W. Twelfth street).....	Gullmant Organ School.....	No..	6	1	7	17	24	41	1 year	.....	.....	.....	.....
New York (40 W. One hundred and fiftieth street).....	Manhattan College of Music.....	No..	11	1	12	35	80	115	10 lessons	.....	.....	200	500
New York (2 W. One hundred and twenty-first street).....	Marks Conservatory of Music.....	No..	3	2	5	37	73	110	5 weeks	90	100	100	150	
New York (128 W. Twenty-third street).....	The Carlton Conservatory of Music.....	No..	5	5	10	100	100	200	2 lessons	25	100	.....	.....
New York (Broadway and Eighth street).....	Virgil School of Music.....	No..	3	2	5	37	69	106	No limit	.....	100	.....	500
New York.....	Wirtz Piano School.....	No..	1	5	6	.....	.....	.....	10 weeks	100	.....	.....	.....
Peekskill.....	Peekskill Conservatory of Music.....	No..	1	2	3	15	80	95	.....do	20	80	.....	.....
Do.....	The Institute Conservatory.....	No..	2	.....	2	17	24	41	.....do	25	100	20	250 500
OHIO.														
Cincinnati.....	College of Music of Cincinnati.....	Yes	9	9	40	570	610	10 weeks	80	60	40	118	3,000
Cleveland.....	The Wolfram College of Music.....	No..	7	1	8	15	150	165	Term	10	100	8	.....
Do.....	The Cleveland School of Music.....	Yes	5	3	8	30	170	200	10 weeks	.....	100	5	3,500
Columbus.....	The Capitol College of Oratory and Music.....	Yes	5	3	8	28	54	82	3 months	50	25	70	15	1,000 500
Toledo.....	The Toledo Conservatory of Music.....	Yes	4	4	8	50	356	406	10 weeks	20	100	8	5,600 3,000	
Warren.....	Dana's Musical Institute.....	Yes	8	1	9	53	82	135	.....do	40	.....	20	40 45 32

TABLE 6.—Statistics of independent schools of music—Continued.

State and post-office.	Name of institution.	Director of music.	In- cor- porated.	Instructors in music.			Students enrolled in department of music.			Shortest period for which stu- dents are received.	Per cent of students com- pleting high school course of 3 years or more.	Per cent of students devot- ing less than 5 hours per week to music.	Per cent devoting more than 5 but less than 10 hours per week to music.	Per cent devoting 10 hours or more per week to music.	Graduates in last 5 years.	Students not graduates re- ceiving certificates in last 5 years.	Number of volumes in li- brary.	Value of library.
PENNSYLVANIA.	Combs Conservatory of Music.	Gilbert R. Combs.....	No.	.....	.....	200	862	1,062	20 weeks..	20	60	10	30	155	320	3,000	\$2,500	
	Pennsylvania College of Music.	Kate H. Chandler....	Yes.	7	5	12	23	92	115	.....do....	8	50	50	0	25	49	2,000	5,000
	The Hahn Violin School....	Frederick E. Hahn....	No.	5	4	9	65	32	97	.....do....	.....	90	.....	.....	.....	.....	.....	.....
	The Sternberg School of Music.	Constantine Von Sternberg.	Yes.	5	16	21	.....	.....	500	.....do....	100	.....	.....	.....	.....	.....	.....	.....
	Pittsburgh Conservatory of Music.	Beveridge Webster....	No.	3	7	10	25	250	275	.....do....	80	100	.....	16	.....	300	600	.....
	Von Kunits School of Music.	Luigi Maria Von Kunits.	No.	4	6	10	35	175	210	5 weeks..	.....	.....	.....	.....	.....	5,000	.....	.....
	J. T. Watkins Vocal Studio. Villa Maria (Musical De- partment).	John T. Watkins Sister M. Dolores....	.....	1	7	7	25	75	100	20 lessons	100	.....	.....	10	.....	.....	.....	.....
	TENNESSEE.	Mrs. Forrest Nixon's School of Music.	Mrs. Forrest Nixon..	No.	1	1	3	31	34	1 month..	5	.....	.....	.....	.....	.....	.....	.....
	Chattanooga.	Chattanooga School of Music.	R. L. Teichfuss....	No.	2	1	3	10	24	34	10 weeks..	.....	.....	.....	9	.....	156	650
	TEXAS.	Landon Conservatory of Music.	Chas. W. Landon....	Yes.	3	7	10	15	220	235	5 weeks... 1 month..	20	75	20	5	21	300	600
Waco.	Waco Conservatory of Music.	W. B. Schimmelpfen- ning.	No.	3	5	8	19	87	106	1 month..	90	10	.....	.....	20	50	75	
WISCONSIN.	Wisconsin Conservatory of Music.	John H. Frank.....	Yes.	11	8	19	200	400	600	10 weeks..	8	100	.....	.....	80	305	350	
Milwaukee.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

TABLE 7.—Statistics of departments of music in colleges and universities.

State and post-office.	Name of Institution.	Director of music.	In- cor- pora- ted.	Instructors in music.			Students enrolled in department of music.			Shortest period for which students are received.	Per cent of students completing high school course of 3 years or more.	Per cent of students devoting less than 5 hours per week to music.	Percent devoting more than 5 but less than 10 hours per week to music.	Per cent devoting 10 hours or more per week to music.	Graduates in music in last 5 years.	Students not graduates receiving certificates in music in last 5 years.	Number of volumes in library.	Value of library.
				Male.	Female.	Total.	Male.	Female.	Total.									
ARKANSAS.																		
Arkadelphia.....	Ouachita Conservatory of Fine Arts.	William L. Thickett.	Yes.	2	7	9	8	190	198	1 term....	0	100	0	0	46	0	0	0
Clarksville.....	Arkansas Cumberland College.	Mrs. Jewelle H. Crenshaw.	Yes.	2	2	2	0	0	43	1 month..	0	0	0	0	0	0	0	
Fayetteville.....	University of Arkansas.	Miss Hazel Yates.	Yes.	1	4	5	2	85	87	22 weeks..	18	0	0	0	8	0	0	
Little Rock.....	Philander Smith College.	Miss Mildred Bryant.	Yes.	1	1	1	6	56	62	1 month..	0	0	0	0	0	0	0	
CALIFORNIA.																		
East Oakland.....	California College.	Madam Otto Blankhart.	No.	1	3	4	4	6	10	1 month..	50	0	0	0	0	0	0	
Los Angeles.....	Occidental School of Music.	Dwight C. Rice.	No.	3	1	4	14	87	101	1 month..	20	100	0	0	10	0	0	
Do.....	University of So. California.	Walter F. Skeele.	No.	3	5	8	26	155	181	1 lesson..	50	95	0	0	15	5	150	
Oakland.....	St. Mary's College.	Prof. Schorcht.	Yes.	3	3	3	91	0	91	5 months.	0	50	0	0	0	0	\$200	
COLORADO.																		
Boulder.....	University of Colorado.	George M. Chadwick.	No.	1	1	3	49	52	52	18 weeks..	100	0	0	0	0	0	0	
Colorado Springs...	Colorado College.	Edward D. Hale.	No.	1	3	4	3	60	63	6 months.	90	100	0	0	0	63	50	
CONNECTICUT.																		
New Haven.....	Yale University.	Horatio Parker.	No.	10	0	10	34	58	92	1 term....	95	94	0	0	40	33	500	
FLORIDA.																		
De Lane.....	John B. Stetson University.	Orwin A. Morse.	No.	2	4	6	23	92	115	6 weeks..	40	90	0	0	11	0	0	
Winter Park.....	Rollins College.	Gertrude M. Leeper.	No.	3	3	3	8	71	79	6 weeks..	0	0	0	0	6	0	0	

TABLE 7.—Statistics of departments of music in colleges and universities—Continued.

State and post-office.	Name of institution.	Director of music.	In- cor- po- rated.	Instructors in music.			Students enrolled in department of music.			Shortest period for which students are received.	Per cent of students completing high school course of 3 years or more.	Per cent of students devoting less than 5 hours per week to music.	Per cent of students devoting more than 5 but less than 10 hours per week to music.	Per cent of students devoting 10 hours or more per week to music.	Graduates in music in last 5 years.	Students not graduates receiving certificates in last 5 years.	Number of volumes in library.	Value of library.
				Male.	Female.	Total.	Male.	Female.	Total.									
GEORGIA.	Wrightsville.....	Warthen College.....	Yes.	2	2	4	39	41	1 term....	16	50	25	25	0	4	.....	.....	.....
	IDAHO.																	
Moscow.....	University of Idaho.....	Isaac J. Cogswell.....	.....	3	2	5	9	59	68	1 semester	60	90	.....	.....	4	.....	21	\$37
ILLINOIS.	Abingdon.....	Hedding College.....	Yes.	5	.....	.....	.....	.....	100	12 weeks..	60	40	.....	.....	25	.....	.....	.....
	Alton.....	Shurtleff College.....	.....	2	2	4	12	48	60	13 weeks..	50	100	.....	.....	38	.....	.....	.....
Chicago.....	St. Ignatius College.....	Rev. Henry J. Dumbach.	.....	2	.....	2	148	.....	148	1 quarter	30	100	0	0	0	.....	.....	.....
Decatur.....	James Millikin University.....	Hermann H. Haeuper	.....	6	2	8	40	226	266	9 weeks...	80	75	20	5	.....	17	50	175
Evanson.....	Northwestern University.....	P. C. Lutkin.....	.....	16	9	25	143	304	447	.....do....	60	77	23	28	82	.....	.....	.....
Galesburg.....	Knox College.....	William F. Bentley.....	.....	3	6	9	47	307	354	1 lesson...	.....	.....	50	25	44	301	.....	.....
Do.....	Lombard College.....	Grant Hadley.....	No.	1	1	2	10	13	23	1 term....	90	.....	.....	.....	9	7	.....	.....
Greenville.....	Greenville College.....	Miss Emily G. Kay.....	.....	2	2	4	17	51	68	10 weeks..	25	100	.....	41	.....	.....	.....	.....
Greenville.....	Ferry Hall.....	Miss Carrie Ripley.....	Yes.	3	3	6	.....	99	99	.....	50	100	.....	3	.....	.....	.....	.....
Lake Forest.....	Monmouth College.....	T. Merrill Austin.....	.....	3	4	7	74	210	284	12 weeks..	80	50	50	31	.....	.....	.....	.....
Monmouth.....	Northwestern College.....	Grace A. Austen.....	Yes.	3	4	7	60	75	135	1 term....	50	0	20	80	22	9	.....	.....
Naperville.....	Augustana College.....	Emil Larson.....	Yes.	3	4	7	45	109	154	12 weeks..	50	100	.....	9	.....	.....	.....	.....
Rock Island.....	University of Illinois.....	Frederick L. Lawrence.	.....	2	1	3	.....	313	313	.....	45	50	30	20	.....	.....	.....	.....
Urbana.....																		
INDIANA.																		
Collegeville.....	St. Joseph's College.....	Benjamin Zollner.....	Yes.	4	.....	4	30	.....	30	No limit..	10	5	25	70	.....	.....	.....	.....
Franklin.....	Franklin College.....	Mrs. Minnie Bruner	.....	2	2	4	9	54	63	10 weeks..	.....	100	.....	.....	8	.....	70	125
Green Castle.....	De Pauw University.....	Belle A. Mansfield, A. M.	Yes.	1	7	8	150	250	400	1 term....	50	.....	.....	.....	22	.....	.....	.....

Hanover.....	Hanover College.....	Miss Emma House.....	No.....	2	2	14	45	56	3 months	75	100	10	1	30	75
Moore's Hill.....	Moore's Hill College.....	Mrs. E. Louise Williams.....	Yes.....	1	3	4	10	50	12 weeks..	25	100	10	1	30	75
Notre Dame.....	University of Notre Dame.....	Bro. Gerard, C.S.C.....	No.....	3	3	75	75	75	5 months	100	100	10	1	30	75
St. Meinrad.....	St. Meinrad College.....	Rev. Vincent Wagner.....	No.....	3	3	55	55	55	1 year.....	8	92	10	1	30	75
INDIAN TERRITORY.															
Muskogee.....	Henry Kendall College.....	Miss Lucretia C. Miller.....	No.....	2	2	4	9	28	No limit..	100	100	10	1	30	75
IOWA.															
Charles City.....	Charles City College.....	Miss Grace Raymond.....	Yes.....	1	2	25	100	125	12 weeks..	25	100	4	1	30	75
Dubuque.....	St. Joseph's College.....	Rev. A. E. Palmer.....	Yes.....	2	3	35	170	205	1 year.....	50	75	10	1	30	75
Fairfield.....	Tarsons College.....	James P. Moorhead.....	Yes.....	2	2	4	113	117	1 term.....	90	100	10	1	30	75
Fayette.....	Upper Iowa University.....	Mrs. Ellen Moorhead.....	Yes.....	2	2	35	115	160	11 weeks..	33	83	10	1	30	75
Grinnell.....	Iowa College.....	Dudley L. Smith.....	Yes.....	3	3	28	17	192	3 months..	76	100	10	1	30	75
Hopkinton.....	Lincoln College.....	Miss Anna A. Young.....	Yes.....	1	1	10	22	333	Any time..	90	100	10	1	30	75
Keosauqua.....	Stinson College.....	F. E. Brown.....	Yes.....	7	2	10	16	120	No limit..	50	25	25	15	30	75
Sioux City.....	Morningside College.....	Judson W. Mather.....	Yes.....	1	4	30	110	140	10 weeks..	30	50	25	15	30	75
Storm Lake.....	Buena Vista College.....	E. Theo. Manning.....	Yes.....	1	2	3	40	80	No limit..	75	100	10	1	30	75
KANSAS.															
Baldwin.....	Baker University.....	R. G. McCutchan.....	No.....	2	2	4	20	160	No limit..	75	100	10	1	30	75
Emporia.....	College of Emporia.....	Mrs. Robert L. Jones.....	No.....	2	4	6	52	99	17 weeks..	50	50	10	7	30	75
Holton.....	Campbell College.....	Oscar M. Schoebel.....	Yes.....	2	1	3	10	108	10 weeks..	75	100	10	1	30	75
Lawrence.....	Kansas State University.....	Charles S. Shilton.....	Yes.....	4	7	11	18	150	9 weeks..	60	50	45	5	18	40
Manhattan.....	Kansas State Agricultural College.....	Prof. Olof Valley.....	Yes.....	2	2	4	523	502	3 months..	20	100	10	1	30	75
St. Marys.....	St. Mary's College.....	Joseph A. Rielog, S. J.....	No.....	3	3	120	60	75	5 months..	40	90	10	1	30	75
Wichita.....	Friends University.....	Miss Leona Wright.....	No.....	3	3	15	60	75	No limit..	75	100	10	1	30	75
KENTUCKY.															
Glasgow.....	Liberty College.....	Mrs. Geo. J. Burnett.....	No.....	5	5	3	90	93	1 quarter..	50	100	10	1	30	75
LOUISIANA.															
Convent.....	Jefferson College.....	Prof. J. L. Stalart.....	Yes.....	2	2	42	42	42	5 months..	7	100	10	1	30	75
MARYLAND.															
Ellicott City.....	Rock Hill College.....	Brother Julius.....	Yes.....	2	2	20	10	13	No limit..	100	100	10	1	30	75
New Windsor.....	New Windsor College.....	Carolyn H. Parkhurst.....	Yes.....	1	1	3	10	13	No limit..	100	100	10	1	30	75
MASSACHUSETTS.															
Amherst.....	Amherst College.....	William P. Bigelow.....	No.....	1	1	70	70	70	17 weeks..	100	100	10	1	30	75
Boston.....	Boston University.....	John P. Marshall.....	No.....	2	2	4	55	59	1 term.....	100	100	10	1	30	75
Cambridge.....	Harvard University.....	Walter R. Spalding, A. M.....	Yes.....	4	4	210	210	210	1 year.....	100	100	10	1	30	75
Tufts College.....	Tufts College.....	Leo Rich Lewis.....	No.....	2	2	16	35	51	do.....	100	90	10	1	30	75

TABLE 7.—Statistics of departments of music in colleges and universities—Continued.

State and post-office.	Name of institution.	Director of music.	In- cor- porated.	Instructors in music.		Students enrolled in department of music.		Shortest period for which stu- dents are received.	Per cent of students com- pleting high school course of 3 years or more.	Per cent of students de- voting less than 5 hours per week to music.	Per cent devoting more than 5 but less than 10 hours per week to music.	Per cent devoting 10 hours or more per week to music.	Graduates in music in last 5 years.	Students not grad- uating re- ceiving certificates in music in last 5 years.	Number of volumes in library.	Value of library.
				Male.	Female.	Total.	Male.	Female.	Total.							
MICHIGAN.	Agricultural College.	Miss Louise Freyhofer	Yes.	2	2	4	7	88	95	100	10		14			
	Hillsdale College.	Melville W. Chase		2	2	4	25	80	105	90	10					
	Holland.	John B. Nykerk		3	3	6	6									
	Olivet College.	Elizabeth Bintliff, A. M.	Yes.	2	6	8	15	80	95	70	20	33	18	7	6,948	\$4,000
MINNESOTA.	Northfield.	William L. Gray	No.	1	2	3	6	62	68	85	23				125	275
	University of Minnesota.		Yes.	2	2	4	6	26	32	100			1		50	60
	Winnipeg.	Prof. J. M. Pearson	Yes.	1	1	2	31	82	113	22	100		11			
MISSOURI.	Clarkburg College.	Charles Hall	Yes.	1	1	2	1	19	20	100					60	150
	University of Missouri.	Fritz Kroulik		1	1	2	14	23	37	100						
	Glasgow.	Miss M. Elizabeth Watkins	Yes.	2	2	4	12	25	37	60			6			
	Liberty.	R. P. Rider	Yes.	3	3	6	45		45	33	100					
	Marshall.	Edgar S. Place	Yes.	1	2	3	65	157	162	10	100		7			
	Missouri Valley College.	William C. Chalfant	No.	2	5	7	30	102	132	25	90	10	6			
	Springfield.	Frank L. Eyer	Yes.	2	3	5	20	117	137	100			22	6		
	Tarkio College.	Zeno Nagel	Yes.	1	5	6	21	61	82	40	100					
MONTANA.	Central Wesleyan College.															
	Montana Agricultural College	F. A. Olinert	No.	2	2	4	20	20	40	100	100		8			
Missoula.	University of Montana.	Blanche Whitaker		1	1	2	6	42	48	90						

[illegible]

TABLE 7.—Statistics of departments of music in colleges and universities—Continued.

State and post-office.	Name of institution.	Director of music.	In- cor- pora- ted.	Instructors in music.			Students enrolled in department of music.			Shortest period for which stu- dents are received.	Per cent of students com- pleting high school course of 3 years or more.	Per cent of students de- voting less than 5 hours per week to music.	Per cent devoting more than 5 but less than 10 hours per week to music.	Per cent devoting 10 hours or more per week to music.	Graduates in music in last 5 years.	Students not graduates re- ceiving certificates in music in last 5 years.	Number of volumes in library.	Value of library.
				Male.	Female.	Total.	Male.	Female.	Total.									
OHIO—continued.																		
New Concord.....	Muskingum College.....	Mrs. Eva H. Hull.....	Yes.....	3	3	10	55	65	1 term.....	55	.....	.....	.....	.....	36	15	.....	.....
Oberlin.....	Oberlin College.....	Charles W. Morrison.....	No.....	3	3	32	491	552	3 months.....	100	80	20	.....	.....	10	0	.....	.....
Oxford.....	Miami University.....	S. S. Myers.....	No.....	1	1	5	15	20	1 year.....	50	100	40	.....	.....	20	.....	.....	.....
Rio Grande.....	Rio Grande College.....	George S. Bohanan.....	No.....	2	3	5	2	48	3 weeks.....	50	100	.....	.....	52	.....	.....	.....
Springfield.....	Wittenberg College.....	J. Frank Maguire.....	No.....	4	1	5	35	145	10 term.....	35	10 weeks.....	.....	.....	26	.....	200	\$200	
Westerville.....	Otterbein University.....	Gustav Meyer, Ph. D.....	No.....	3	3	6	1	1	8 weeks.....	33	91	9	.....	16	.....	100	.....
Wooster.....	University of Wooster.....	J. Lawrence Erb.....	No.....	1	1	2	19	21	5 term.....	33	.....	.....	.....	15	3	.....	.....
Yellow Springs.....	Antioch College.....	Florence M. Williams.....	No.....	2	5	7	.....	.....	.....	.....	50	30	25	45	.....	150	200	
OKLAHOMA.																		
Norman.....	State University.....	Henry D. Guelick.....	No.....	1	2	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
OREGON.																		
Albany.....	Albany College.....	Carroll H. Palmer.....	No.....	1	2	7	70	77	1 lesson.....	75	.....	.....	.....	.....	.....	.....	.....	.....
Corvallis.....	Oregon Agricultural College.....	Gerard Tallandier.....	No.....	4	2	6	36	71	No limit.....	63	97	3	0	2	.....	.....	.....	.....
Eugene.....	University of Oregon.....	Irving M. Glen.....	No.....	1	5	6	20	60	1 month.....	50	100	.....	.....	4	30	100	.....	.....
Philomath.....	Philomath College.....	Mrs. O. V. White.....	No.....	2	2	4	15	37	3 months.....	100	.....	.....	.....	7	.....	.....	.....	.....
PENNSYLVANIA.																		
Annville.....	Lebanon Valley College.....	Herbert Oldham.....	Yes.....	2	3	5	29	108	10 weeks.....	80	20	60	20	42	5	200	250	.....
Beatty.....	St. Vincent College.....	P. Louis Haas.....	Yes.....	6	6	12	60	60	6 months.....	100	.....	.....	.....	.....	.....	200	500	.....
Beaver.....	Beaver College.....	Chas. G. Ferrata.....	Yes.....	2	1	3	14	127	do.....	16	100	.....	.....	19	37	1	300	450
Grove City.....	Grove City College.....	Dr. H. Froehmann.....	Yes.....	2	1	3	15	85	12 weeks.....	10	20	20	.....	.....	.....	.....	.....	.....
Lewisburg.....	Bucknell University.....	Elysée Avignone.....	Yes.....	2	5	7	24	83	do.....	50	100	.....	.....	48	.....	.....	.....	.....
Meadville.....	Allegheny College.....	Harry W. Manville.....	Yes.....	6	3	9	75	325	5 weeks.....	75	50	35	15	80	.....	200	300	.....
New Wilmington.....	Westminster College.....	W. W. Campbell.....	Yes.....	1	1	2	31	57	5 weeks.....	75	0	50	50	5	.....	100	300	.....
Philadelphia.....	The Temple College.....	Oscar W. Streiland.....	Yes.....	15	6	21	14	18	1 term.....	70	20	79	75	8	.....	100	300	.....
Selling Grove.....	Susquehanna University.....	E. Edwin Sheldon.....	Yes.....	1	3	4	18	79	10 weeks.....	70	20	79	75	8	.....	125	500	.....
Waynesburg.....	Waynesburg College.....	C. W. Best.....	Yes.....	2	3	5	15	95	1 term.....	15	.....	.....	.....	23	.....	.....	.....	.....

SOUTH CAROLINA.		Chadlin University.....	Miss C. Elsie Farrham	Yes.....	2	2	6	32	38	14 weeks..	50	100	.....	3	.....	.....
Orangeburg.....		State College Agriculture and Mechanic Arts.....	Henry H. Loudonback	.....	3	1	4	18	82	100	50	.....	.....	.....	1	.....
SOUTH DAKOTA.		Redfield College.....	Herbert M. King.....	.....	2	37	60	97	103	1 lesson...	0	90	.....	5	15	.....
Brookings.....		Yankton College.....	Lee N. Dailey.....	Yes.	1	2	3	15	88	.....	0	100	.....	20	.....	.....
TENNESSEE.		Grant University.....	Frances C. Moffitt.....	Yes.....	2	2	8	56	64	No limit..	33	100	.....	1	3	22
Athens.....		Southwestern Baptist Uni- versity.....	Rudolph Richter.....	No..	2	4	10	70	80	5 months	75	.....	.....	11	10	.....
Nashville.....		Fisk University.....	Miss Jennie A. Robin- son.....	Yes.....	5	5	36	120	156	1 month..	.....	100	.....	11	.....	.....
Spencer.....		Burritt College.....	Mrs. Laura D. Worth- ington.....	.....	1	2	4	21	25	5 months	.....	100	.....	.....	.....	.....
TEXAS.		South Western University.....	Clara A. Oldfield.....	Yes.....	6	6	5	134	139	3 months	80	50	.....	20	15	8
Fort Worth.....		Fort Worth University.....	Miss Myrtle Hess.....	No..	1	2	3	69	75	do.....	10	100	.....	.....	.....	.....
Waco.....		Baylor University.....	Rudolf Hoffman.....	No..	6	4	10	.....	410	.....	.....	.....	.....	.....	.....	.....
Waxahachie.....		Trinity University.....	Howard E. Goodsell.....	Yes.	2	2	4	5	88	1 term...	60	100	.....	4	.....	.....
UTAH.		Brigham Young College.....	William O. Robinson.....	Yes.	4	1	5	138	187	No limit..	.....	75	25	.....	.....	.....
VIRGINIA.		Bridgewater College.....	Charles W. Roller.....	.....	1	5	6	34	44	3 months	50	5	60	25	13	0
Fredericksburg.....		Fredericksburg College.....	Prof. F. A. Franklin.....	Yes.	1	2	.....	60	.....	1 month..	33	100	.....	.....	.....	.....
Richmond.....		Virginia Union University.....	Mrs. Jessie A. Davis.....	Yes.	1	1	80	.....	80	.....	.....	.....	.....	.....	.....	.....
WASHINGTON.		State College of Washington.	W. B. Strong, Her- bert Kimbrough.....	No..	2	4	6	60	180	9 weeks...	85	.....	100	3	.....	.....
Pullman.....		Whitworth College.....	Alberta V. Munro.....	.....	2	5	7	8	97	105	50	50	.....	1	3	.....
Tacoma.....		Whitman College.....	Stephen B. L. Pen- rose.....	No..	5	3	8	22	129	151	25	90	.....	7	3	200
Walla Walla.....		.....	.....	.....	.....	.....	.....	.....	.....	18 weeks..	.....	.....	.....	.....	.....	200
WEST VIRGINIA.		Bethany College.....	Jean C. Moos.....	Yes.	1	1	2	6	43	1 term...	75	100	.....	24	1	.....
Bethany.....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
WISCONSIN.		Lawrence University.....	T. Dillwyn Thomas.....	No..	2	2	4	8	67	6 weeks...	.....	.....	.....	2	.....	.....
Appleton.....		Beloit College.....	Abram R. Tyler.....	No..	2	1	3	30	70	3 months	25	100	.....	400	1,500	.....
Madison.....		University of Wisconsin.	Fletcher A. Parker.....	No..	6	7	13	66	244	9 weeks...	100	90	8	44	500	1,000
Milwaukee.....		Milwaukee-Downer College.....	Emil Liebling.....	Yes.	2	7	9	0	100	18 weeks	100	100	.....	32	.....	.....
Ripon.....		Ripon College.....	Theodore F. Meier.....	No..	1	1	2	7	26	5 weeks...	75	100	.....	.....	.....	.....

MUSIC EDUCATION IN THE UNITED STATES.

State and post-office.	Name of institution.	Director of music.	In- cor- porated.			Instructors in music.			Students enrolled in department of music.			Shortest period for which stu- dents are received.	Per cent of students com- pleting high school course of 3 years or more.	Per cent of students devot- ing less than 5 hours per week to music.	For cent devoting more than 5 but less than 10 hours per week to music.	For cent devoting 10 hours or more per week to music.	Graduates in music in last 5 years.	Students not graduates re- ceiving certificates in mu- sic in last 5 years.	Number of volumes in library.	Value of library.
			Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.									
ALABAMA.	Athens College.....	Jean B. Grasse.....	Yes.	1	4	5	.....	95	.....	95	.....	18 weeks.	25	100	.....	.....	3	.....	.....	.....
	Marion.....	E. L. Powers.....	Yes.	1	9	10	0	280	.....	280	.....	18 weeks.	0	85	15	.....	25	3	3,000	\$2,000
	ARKANSAS.																			
Conway.....	Central College.....	Mrs. Lydia Walling.....	Yes.	.....	3	3	.....	65	.....	65	.....	No limit.	100	90	10	.....	12	2	3,000	1,500
CALIFORNIA.	Mills College.....	Louise Lisser.....	Yes.	7	3	10	.....	780	.....	780	.....	4 year.	23	100	.....	.....	.....	.....	.....	.....
	DISTRICT OF COLUM- BIA.																			
	Washington.....	Sister Helen Loyola.....	Yes.	.....	1	1	.....	14	.....	14	.....	.....	.....	0	.....	.....	.....	.....	.....	.....
GEORGIA.	College Park.....	J. Lewis Browne.....	Yes.	1	6	7	.....	110	.....	110	.....	1 month.	90	95	.....	.....	9	18	.....	.....
	Greenville.....	E. A. Just.....	Yes.	1	4	5	.....	100	.....	100	.....	4 months.	100	100	.....	.....	.....	.....	.....	.....
	La Grange.....	Alwyn M. Smith.....	Yes.	1	6	7	.....	148	.....	148	.....	1 month.	95	75	25	.....	20	63	60	50
ILLINOIS.	Illinois College.....	Ferdinand Haberkorn.....	Yes.	4	3	7	22	118	.....	140	.....	No limit.	50	90	10	0	20	1	1,000	2,000
	Jacksonville.....	Wm. H. Sherwood.....	Yes.	1	3	4	.....	70	.....	70	.....	3 months.	50	100	.....	.....	.....	.....	.....	.....
	Rockford.....	Emily Parsons.....	Yes.	1	3	3	1	80	.....	87	.....	1 term.	40	100	.....	.....	.....	.....	.....	.....
KENTUCKY.	Caldwell College.....	George Edwards.....	Yes.	2	2	4	4	69	.....	73	.....	1 term.	40	100	.....	.....	.....	.....	.....	.....
	Hopkinsville.....	Bethel Female College.....	Yes.	2	2	2	.....	45	.....	45	.....	do.	.....	.....	.....	.....	9	.....	.....	.....
	Owensboro.....	Henry W. Pearson.....	Yes.	1	3	4	20	90	.....	110	.....	10 weeks.	80	80	20	.....	7	1,000	2,500	.....
Russellville.....	Logan Female College.....		Yes.	.....	3	3	0	71	.....	71	.....	4 year.	.....	.....	.....	.....	2	.....	.....	.....

	Institution	Name	Age	Sex	Color	Religion	Profession	Education	Marital Status	Family Size	Income	Assets	Liabilities	Total Worth
Louisiana.	Sillman Collegiate Institute.....	Miss Gertrude Stonebraker.....	Yes.....	1	1	16	16	1 year.....						
Kentucky.	Louisiana Female College.....	Miss Mary Ransom.....	Yes.....	2	2	29	29	18 weeks..	0	100	0	5		
Maine.	Mansfield Female College.....	Miss Ruth Sligh.....	Yes.....	2	2	50	50		30					
Maine.	Maine Wesleyan Seminary and Woman's College.....	Wilson Fay Morse.....	Yes.....	1	3	4	80	141	221	3 months.	75	50	11	103 125
Maryland.	The Woman's College.....	Maurice G. Beckwith.....	No.....	2	3	5	3	95	98	1 term.....				
Fredrick.	Kee Ma College.....	J. Emory Shaw.....	Yes.....	2	3	5	80	80	80	1 term.....	88	7	5	17
Hagerstown.	Maryland College for Women.....	A. Oahn.....	Yes.....	2	2	4	80	80	6 months.	25				
Lutherville.														
Massachusetts.	Radeliffe College.....	Walter R. Spaulding.....	Yes.....	3	3	3	45	45	1 year.....	100				1,000 2,000
Cambridge.	Mount Holyoke College.....	William C. Hammond.....	Yes.....	3	3	6	112	112	1 year.....	100	100			
South Hadley.	Wellesley College.....	Hamilton C. Macdougall.....	Yes.....	3	3	6	115	115	1 year.....	100	60	40		400
Wellesley.														
Northampton.	Smith College.....	Henry Dyke Sleeper.....	Yes.....	5	6	11	300	300		100	99	1	4	1 400
Mississippi.														
Meridian.	Meridian Female College.....	Anthony Slankowitch.....	Yes.....	1	9	10	5	470	475	1 term.....	50		33	40
Missouri.														
Columbia.	Christian College.....	J. Emory Shaw.....	Yes.....	2	5	7	7	145	150	10 months	33			
Fayette.	Howard Payne College.....	Miss Nannie L. Wright.....	Yes.....	6	6	3	52	55	1 hour.....	75	100	15	0	17 1
Fulton.	Synodical College.....	James M. Weddell.....	Yes.....	1	2	3	107	113	5 months	60	100	20	12	
Lexington.	Central College for Women.....	D. F. Conrad.....	Yes.....	1	5	6	124	124	1 year.....	70				
Liberty.	Liberty Ladies College.....	Marion F. Dunwoody.....	Yes.....	2	4	6	200	200	1 semester	25	100	74	61	
Mexico.	Hardin College.....	Arnold E. Guerue.....	Yes.....	2	4	6	168	170	6 months.	75	33	66	13	8 1,500 500
Nevada.	Colley College.....	Miss Anna Jansen.....	Yes.....	2	5	7	2	475	475	1 year.....	17	100	30	
New York.	Packer Collegiate Institute.....	R. Huntington Woodman.....	Yes.....	1	1	1	202	202	1 semester	100	100			900 1,200
Brooklyn.	Vassar College.....	George C. Gow.....	Yes.....	3	3	6								
Poughkeepsie.														
North Carolina.														
Charlotte.	Elizabeth College.....	Harry J. Zehm.....	Yes.....	1	4	5	6	72	78	10 weeks..	90	10	14	2
Greensboro.	Greensboro Female College.....	F. W. Craft.....	Yes.....	2	2	4	1	175	176	18 weeks..	100	100	7	
Baptist University.	Baptist University.....	Waide Brown.....	No.....	2	7	9	2	252	254	1 year.....	50	50	50	12

TABLE 8.—Statistics of departments of music in colleges for women—Continued.

State and post-office.	Name of institution.	Director of music.	In- cor- porated.	Instructors in music.			Students enrolled in department of music.			Shortest period for which stu- dents are received.	Per cent of students com- pleting high school course of 3 years or more.	Per cent of students de- voting less than 5 hours per week to music.	Per cent devoting more than 5 but less than 10 hours per week to music.	Per cent devoting 10 hours or more per week to music.	Graduates in music in last 5 years.	Students not graduates re- ceiving certificates in mu- sic in last 5 years.	Number of volumes in library.	Value of library.
				Male.	Female.	Total.	Male.	Female.	Total.									
OHIO.	Oxford College for Women...	Max v. L. Swarthout...	Yes.	2	2	4	2	82	84	1 year....	50	80	10	10	17	0	195	\$500
	Do.	Alice A. Porter.....	Yes.	1	8	9	...	89	89	18 weeks..	90	85	15	...	5	0	...	...
	Painesville.....	Harry C. Brooks.....	Yes.	3	2	5	5	86	91	12 weeks..	48	80	20	...	4	...	3,000	...
PENNSYLVANIA.	Blairsville College.....	Helena J. Walter.....	Yes.	...	2	2	4	60	64	...	...	...	...	...	29	...	...	...
	Irving College.....	Harry C. Harper.....	Yes.	1	4	5	...	97	97	...	80	...	...	...	...	...	...	...
SOUTH CAROLINA.	Columbia.....	George L. Kittridge...	Yes.	2	6	8	...	...	...	4 months	...	...	...	...	...	...	...	...
	Gaffney.....	Harold A. Loring.....	Yes.	1	3	4	...	104	104	5 months	95	75	25	0	...	...	...	...
	Spartanburg.....	Arthur L. Manchester.	Yes.	2	5	7	4	214	218	19 weeks..	75	85	15	...	13	5	500	400
TENNESSEE.	Sullins College.....	Louis Albertl.....	Yes.	4	5	9	20	230	250	2 months.	75	60	40	...	5	...	...	400
	Murfreesboro.....	Martha A. Hopkins...	Yes.	3	3	6	...	60	60	1 year....	10	...	...	...	8	...	...	...
	Nashville.....	Miss Caroline Jenkins.	Yes.	1	3	4	...	68	68	...	50	100	...	...	...	...	...	...
TEXAS.	Chappell Hill.....	M. J. Klein.....	Yes.	1	1	2	...	60	60	...	100	...	...	...	15	...	...	...
	San Antonio.....	Miss Frances M. Ross.	Yes.	1	5	6	...	135	135	...	75	...	...	...	...	...	...	...
VIRGINIA.	Virginia Institute.....	Samuel T. Schroetter..	...	2	2	4	10	110	120	3 months.	10	100	...	...	9	100	...	...
	Charlottesville.....	Miss Mabel F. Main...	Yes.	...	6	6	...	150	150	2 months.	30	100	...	...	...	...	...	...
	Danville.....	Miss Alice Crane.....	Yes.	1	5	6	...	100	100	No limit..	25	...	50	...	6	...	...	...
MARION.	Hollins.....	Emil B. Menckels.....	Yes.	3	4	7	...	173	173	...	100	...	...	...	23	21	...	...
	Marion College.....	Caroline Manning.....	Yes.	...	3	3	3	100	103	10 weeks..	10	...	50	...	3	...	...	...

TABLE 9.—Statistics of departments of music in normal schools.

State and post-office.	Name of institution.	Director of music.	In- cor- porated.	Instructors in music.			Students enrolled in department of music.			Shortest period for which stu- dents are received.	Per cent of students com- pleting high school course of 3 years or more.	Per cent of students devot- ing less than 5 hours per week to music.	Percent devoting more than 5 but less than 10 hours per week to music.	Per cent devoting 10 hours or more per week to music.	Graduates in music in last 5 years.	Students not graduates re- ceiving certificates in mu- sic in last 5 years.
				Male.	Female.	Total.	Male.	Female.	Total.							
ALABAMA.	Falkville.....	Miss Lucy Hunter.....	Yes.	1	3	4	.....	10	10	4 months	10	.....	.....	.....	.....	.....
	State Normal School.....	Exa Hames.....	Yes.	1	1	2	70	90	160	3 months	0	75	.....	.....	.....	.....
	Jacksonville.....	Miss Anna B. Lyman.....	No.	1	1	2	2	30	32	.....	.....	.....	.....	.....	1	.....
	Mobile.....	Mrs. O. Worthy.....	No.	2	2	4	2	73	75	.....	0	.....	.....	.....	.....	.....
	Troy.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
ARIZONA.	Northern Arizona Normal.....	Elizabeth Gleason.....	.....	3	3	6	13	43	56	.....	33	0	80	0	38	.....
	Flagstaff.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
CALIFORNIA.	State Normal School.....	Miss Lida Lennon.....	No.	1	1	2	20	140	160	.....	10	100	.....	.....	.....	.....
	Chico.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
CONNECTICUT.	State Normal School.....	Marion H. Tweedy.....	No.	1	2	3	2	58	60	1 year.....	90	100	.....	.....	.....	25
	Danbury.....	William E. Brown.....	.....	.....	.....	.....	.....	200	200	2 years.....	100	100	.....	.....	.....	.....
GEORGIA.	State Normal School.....	Chas. S. Stange.....	Yes.	1	1	2	13	28	41	.....	40	.....	.....	.....	.....	.....
	Douglas.....	Edward E. Hipsler.....	Yes.	1	1	2	10	50	60	10 weeks.....	10	33	66	.....	1	3
	Milledgeville.....	Mrs. P. J. Fournier.....	.....	.....	5	5	130	130	130	1 year.....	50	50	.....	.....	10	12
	Thomasville.....	Miss Carrie Michael.....	.....	1	1	2	2	30	32	.....	.....	100	.....	.....	1	.....
	Allen Normal and Industrial School.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
IDAHO.	Lewiston State Normal School.....	Bessie E. Eggeman.....	Yes.	1	1	2	15	93	108	20 weeks.....	60	100	.....	.....	.....	.....

TABLE 9.—Statistics of departments of music in normal schools—Continued.

State and post-office.	Name of institution.	Director of music.	Instructors in music.			Students enrolled in department of music.			Shortest period for which students are received.	Per cent of students completing high school course of 3 years or more.	Per cent of students devoting less than 5 hours per week to music.	Per cent devoting more than 5 but less than 10 hours per week to music.	Per cent devoting 10 hours or more per week to music.	Graduates in music in last 5 years.	Students not graduates receiving certificates in music in last 5 years.
			Male.	Female.	Total.	Male.	Female.	Total.							
ILLINOIS.	Southern Illinois State Normal.....	Richard V. Black.....	No.	1	2	100	125	225	12 weeks.....	60	40				
	Eastern Illinois State Normal.....	Frederick Koeb.....	No.	1	1	1	20	420	2 years.....	100	100				
	Chicago Normal School.....	Henry W. Fairbank.....	No.	1	1	1	13	28	No limit.....	25	90				
	Greer College.....	M. D. Potter.....	No.	1	1	1	60	50	do.....	25	100				
	Kennedy's Business and Normal College.	J. A. Lantz.....	No.	1	1	1	60	50	do.....	25	100				
INDIANA.	Central Normal College.....	Fred Luscomb.....	Yes.	2	1	3	100	150	No limit.....	0		25	10	18	0
	Indiana Normal School.....	Prof. William Bunch.....	Yes.	3	1	4	45	10	1 term.....	2	50				
	Terre Haute.....	Lella Parr.....	Yes.	1	2	3	100	400	do.....	95	79	21			
	Valparaiso.....	Wm. F. Gaskins.....	Yes.	4	2	6	80	320	1 lesson.....	30					
	Western Union College.....	G. J. Duikeloo, B. A.....	Yes.	1	1	2	12	35	3 months.....	30	50	50			16
KANSAS.	Kansas State Normal School.....	Charles A. Boyle.....	Yes.	2	4	6	26	155	9 weeks.....	40	80	20			
	Western State Normal.....	Charles A. Shively.....	Yes.	1	1	2	10	20	30 weeks.....	2				20	
KENTUCKY.	Middleburg Normal College.....	J. S. Lawhorn.....	Yes.	1	1	2	3	12	2 months.....	2					
LOUISIANA.	State Normal School.....	F. Samella Brown.....	No.	3	3		78	78	4 months.....	60					
	City Normal School.....		No.	4	4		110	110	2 years.....	100					

MAINE.	Eastern State Normal School.....	Edward E. Philbrook.....	Yes.	1	2	1	17	200	217	No limit.	10	33	
	Fort Kent.....	Miss May Brown.....					40	60	109		100		
MASSACHUSETTS.	State Normal School.....	Clara C. Prince.....	No.	1	1	5	102	107	107	20 weeks.	100		
	Fitchburg.....	Ellenbeth D. Perry.....		1	1	143	143		143	2 years.	100		
	Salem Normal School.....	T. W. Arnold.....		1	1	5		5	5	do.	100		
	Worcester.....	E. L. Sumner.....		1	1	2				2½ years.			
MICHIGAN.	Central State Normal.....	Harper C. Maybese.....	No.	1	2	3				12 weeks.	50	5	20
	Ypsilanti.....	Frederick H. Pease.....	No.	6	3	9	26	234	260	3 months.	75		100
MINNESOTA.	State Normal School.....	Helen H. Mason.....	No.	1	1	2	200	202	202	3 months.	50		
	Dr. Martin Luther College.....	John Schaller.....	No.	4	4	50	7	57	57	2 years.	100		26
MISSOURI.	Teachers Training School.....	Miss Elsie M. Shawe.....	No.	1	1	0	50	50	50		100		
NEBRASKA.	Missouri State Normal School.....	Celia Campbell.....	Yes.	2	2	4	170	230	400	3 months.	60	5	
	Chillicothe Normal.....	E. H. Williams.....	No.	1	1	2	12	29	41	1 week.	10	85	10
	State Normal School.....	D. R. Gebhart.....	No.	2	1	3	520	640	1,160	No limit.	50	25	21
	Maryville State Normal.....	P. O. Landon.....	1	1	1	25	75	100	100	12 weeks.	75	0	30
	Teachers College.....	Miss Mabel E. Bray.....	Yes.	1	1	1	231	231	231		100	50	
	Stanberry Normal School.....	E. H. Williams.....	Yes.	1	3	4	16	64	80	10 weeks.	15	80	53
NEW HAMPSHIRE.	Fremont.....	C. W. Meeks.....	Yes.	3	3								
	Kearney.....	Miss Mary W. Bailey.....	Yes.	1	1	2	45	245	280	18 weeks.	20	100	
NEW JERSEY.	State Normal School.....	Irving W. Jones.....		1	1	1	102	103			95	100	
NEW YORK.	Normal Training School.....	Douglas H. Snyder.....		1	1		100	100	100	2 years.	100		
NEW YORK.	State Normal School.....	Edith V. Sharpe.....		1	1	2	10	782	792	2 years.	100	0	0
	Brooklyn Training School for Teachers.....	Kate Fowler.....	No.	1	1	1	24	336	430	20 weeks.	100		
	Cortland State Normal School.....	Miss Minnie M. Alger.....	No.	1	1	1	10	208	218	2 years.	100		
	Jamaica Training School.....	Miss Minerva A. Stran-		1	1	1					100		
		ched.											

TABLE 9.—*Statistics of departments of music in normal schools—Continued.*

State and post-office.	Name of institution.	Director of music.	In- cor- porated.	Instructors in music.		Students enrolled in department of music.		Shortest period for which stu- dents are received.	Per cent of students com- pleting high school course of 3 years or more.	Per cent of students de- voting less than 5 hours per week to music.	Per cent devoting more than 5 but less than 10 hours per week to music.	Per cent devoting 10 hours or more per week to music.	Graduates in music in last 5 years.	Students not graduates re- ceiving certificates in mu- sic in last 5 years.
				Male.	Female.	Total.	Male.								Female.	Total.
NEW YORK—cont'd.														
New York	Normal College of the City of New York	Henry T. Fleck		2	2	4								
Do.	New York Training School for Teachers	Charlotte Richardson	No.					2	640					
Do.	Teachers College, Columbia University	Charles H. Farnsworth	No.	1	5	6	50	46	100	100				
Potsdam	State Normal School (Crane Normal In- stitute of Music)	Miss Julia E. Crane	No.	1	3	4	5	41	46	20	6	74	99	
Rochester	Rochester Normal Training School	Mrs. Alice C. Clement			1	1	0	50	50	100			100	
NORTH CAROLINA														
Asheville	Normal and Collegiate Institute	Miss Elizabeth I. Cam- eron	No.		2	2		190	190					
Greensboro	State Normal and Industrial College	Herman H. Hoexter	Yes	2	2	4		150	120	75				
Henderson	Henderson Normal Institute	M. B. Cotton	No.				2	41	43	100				
Winston	Waters Normal Institute	Miss Maurie M. Roberts	Yes		1	1	2	32	34	0	100			
OHIO														
Ada	Ohio Northern University	J. W. Denny	No.	2	2	4	31	160	191	25	75		77	
Cincinnati	North Eastern Ohio Normal College	Anna K. Means	Yes		1	1	10	30	40	60			2	
Cleveland	Cleveland Normal School	Frances J. Kelly			1	1		189	189	100	100			
Columbus	Columbus Normal School	Tillie G. Lord						100	100	90				
Lebanon	National Normal University	Albert S. Hill	Yes	2	2	4	21	39	60	25	40	35		
Toledo	Training School for Teachers	Charles H. Thompson	No.		1	1		80	80	100				
OKLAHOMA														
Alva	Northwestern State Normal	S. G. Smith	Yes	2	2	4	32	67	99	5	15	5	5	
Edmond	Central State Normal		Yes	2	2	4	75	125	200	80			12	
Weatherford	Southwestern State Normal School	Rollin M. Pease		1	2	3	4	50	54	10				

PENNSYLVANIA.														
Bloomsburg.....	State Normal School.....	Yes.....	3	3	18	72	90	No limit.....	0	25	0	25	34	2
Carlisle.....	Southwestern State Normal School.....	Yes.....	2	1	3	15	40	55	do.....	0	100	0	100	1
Carlton.....	Carlton State Normal.....	Yes.....	2	2	7	50	57	1 lesson.....	25	15	25	15	1	1
Edinboro.....	State Normal School.....	Yes.....	3	3	10	40	50	1 term.....	50	25	50	25	25	25
Indiana.....	Indiana State Normal School.....	No.....	1	5	6	125	175	No limit.....	33	75	33	75	15	15
Kutztown.....	Keystone State Normal School.....	No.....	1	2	3	15	85	do.....	5	75	5	75	15	15
Mansfield.....	State Normal School.....	No.....	1	3	4	30	120	do.....	100	100	100	100	100	100
RHODE ISLAND.														
Providence.....	Rhode Island Normal School.....	Yes.....	1	1	1	60	60	2 years.....	100	100	100	100	100	100
SOUTH CAROLINA.														
Greenwood.....	Brewer Normal School.....	No.....	1	1	1	20	21	No limit.....	0	100	0	100	100	100
Lancaster.....	Lancaster Normal and Industrial Institute.....	Yes.....	1	1	5	15	20	3 months.....	12	85	12	85	12	12
Rock Hill.....	Winthrop College.....	1	8	9	225	225	225	.....	100	100	100	100	100	100
SOUTH DAKOTA.														
Madison.....	Madison State Normal School.....	.....	1	1	2	57	59	12 weeks.....	100	100	100	100	100	100
TENNESSEE.														
Nashville.....	Peabody College for Teachers.....	Yes.....	1	1	36	126	162	4 months.....	100	99	100	99	100	100
Denton.....	North Texas State Normal.....	.....	1	1	164	371	535	.....	100	100	100	100	100	100
VERMONT.														
Johnson.....	State Normal School.....	Yes.....	1	1	2	68	70	1 year.....	25	0	100	100	100	100
VIRGINIA.														
Farmville.....	State Female Normal School.....	.....	1	1	1	580	580	1 term.....	12	100	12	100	100	100
Hampton.....	Hampton Normal and Agricultural Institute.....	.....	1	2	3	465	775	.....	100	100	100	100	100	100
WASHINGTON.														
Bellingham.....	Washington State Normal.....	No.....	2	2	180	170	350	No limit.....	75	100	75	100	100	100
Cheney.....	State Normal School.....	.....	1	1	49	103	132	do.....	56	100	56	100	100	100
WEST VIRGINIA.														
Glenville.....	State Normal School.....	.....	1	1	2	22	24	12 weeks.....	25	100	25	100	100	100
West Liberty.....	West Liberty State Normal.....	.....	1	1	5	25	30	10 weeks.....	100	100	100	100	100	100
WISCONSIN.														
Menominee.....	Dunn County Normal.....	.....	1	1	13	77	90	1 year.....	10	100	10	100	0	0
Milwaukee.....	Milwaukee State Normal School.....	.....	1	1	1	424	424	20 weeks.....	0	100	0	100	100	100
Oshkosh.....	State Normal School.....	.....	1	1	57	207	264	20 weeks.....	0	100	0	100	100	100
Platteville.....	Frank F. Churchill.....	.....	1	1	100	200	300	10 weeks.....	35	100	35	100	100	100
St Francis.....	Catholic Normal School.....	Yes.....	2	2	31	112	112	5 months.....	0	100	0	100	100	100
Superior.....	State Normal School.....	No.....	1	1	2	110	112	20 weeks.....	33	100	33	100	100	100

TABLE 10.—Statistics of departments of music in secondary schools.

State and post-office.	Name of institution.	Director of music.	In- cor- porated.	Instructors in music.			Students enrolled in department of music.			Shortest period for which stu- dents are received.	Per cent of students com- pleting high school course of 3 years or more.	Per cent of students de- voting less than 5 hours per week to music.	Per cent devoting more than 5 but less than 10 hours per week to music.	Per cent devoting 10 hours or more per week to music.	Graduates in music in last 5 years.	Students not graduates re- ceiving certificates in mu- sic in last 5 years.	Number of volumes in li- brary.	Value of library.
				Male.	Female.	Total.	Male.	Female.	Total.									
ALABAMA.	Anniston.....	Noble Institute.....	No.	4	4	4	45	45	1 month	100	100	10	1					
	Birmingham.....	Follock Stephens College of Music.....	No.	1	3	4	1	100	101	do.	90	10						
	Lineville.....	Lineville College.....	No.	1	1	2	32	64	do.	25	50	50	9			200	\$150	
	Montgomery.....	Calhoun-Chamberlain School.....	No.	1	2	3	1	40	40	3 months	12	80	20	5			5	
	Newton.....	Baptist Collegiate Institute.....	No.	1	2	3	12	40	52	1 month	5	80						
ARKANSAS.	Amity.....	Amity High School.....	Yes.	1	1	1	3	22	25	No limit	75	100		25				
	Belleville.....	Miss Emma H. Painter.....	No.	1	1	1	3	22	25	1 month	40	100						
	Fordyce.....	Miss May Crenshaw.....	No.	1	1	1	6	25	31	do.	16	100						
	Gentry.....	L. H. Eakes.....	No.	1	1	1	12	12	1 month	90	0	25	75	7	18	200	500	
	Little Rock.....	Emile Trebing.....	No.	2	2	4	30	45	75	No limit								
CALIFORNIA.	Burlingame.....	Joseph Smith.....	No.	3	3	3	8		8	6 months	0	100						
	Los Angeles.....	Mrs. E. T. Parsons.....	No.	1	3	4	40	40	1 year.									
	Do.....	Eva F. Pike.....	No.	1	1	2	40		40		100						125	300
	Oakland.....	Sister Rose.....	Yes.	1	6	7		75	75	10 weeks.	60	20	75	4	8	54		
	Sacramento.....	Sister Mary Michael.....	Yes.	8	8	3	93	96	5 months	81	60	40			65			
COLORADO.	San Francisco.....	Sister M. Bernard.....	No.	4	4	4	110	110	1 session	4	3	110		16	30	100		
	Santa Rosa.....	Sister Agatha.....	No.	4	4	4	2	58	60	5 months				2				
	Colorado Springs.....	A. L. Bohrer.....	No.	2	1	3	17	18	35	10 months.	0	16	19					

CONNECTICUT.

Hartford.....

Do.....

New Milford.....

Norwalk.....

Wallingford.....

Washington.....

Do.....

Windsor.....

DISTRICT OF COLUMBIA.

Washington.....

Washington (1621 Connecticut ave- nue).....

Washington (601 E. Capitol street).....

Washington (2401 Massachusetts ave- nue).....

Washington (Third and T streets no.).....

FLORIDA.

Enstus.....

Jacksonville.....

Tampa.....

GEORGIA.

Atlanta.....

Auburn.....

Augusta.....

Epworth.....

ILLINOIS.

Alton.....

Chicago.....

Do.....

Kankakee.....

La Harpe.....

Media.....

Mendota.....

Mount Carroll.....

Nauvoo.....

Peoria.....

South Ottawa.....

Springfield.....

School for the Blind.....	George H. Marshall.....	Yes.....	2.....	12.....	16.....	28.....	1 term.....	80.....	37.....	250.....	150.....
St. Joseph Seminary.....	Sister M. Loretto.....	Yes.....	7.....	6.....	40.....	41.....	1 year.....	0.....	100.....		
Ingleside School.....	Edwin G. Clemence.....	No.....	1.....	2.....							
Mrs. Mead's School for Girls.....	Mrs. M. E. Mead.....	No.....	2.....	3.....	16.....	16.....					
The Phelps School.....	Gunnery School.....	No.....	1.....	1.....	10.....	10.....	1 year.....	100.....			
Wyckham Rise School.....	Anna E. Wilson.....	No.....	1.....	0.....	10.....	10.....		40.....			
The Campbell School for Girls.....	Fred. B. Bower.....	Yes.....	1.....	3.....							
Gunston Hall.....	Prof. Anton Gloetznor.....	No.....	3.....	4.....	70.....	70.....			2.....	3.....	
Lalse-Phillips School.....	B. Frank Gebest.....	No.....	3.....	6.....	10.....	10.....	1 year.....	60.....			
St. Cecelias Academy.....	Sister M. Olympia.....	Yes.....	3.....	3.....	80.....	80.....					
The Florence School.....	Prof. Arthur D. Mayo.....	No.....	3.....	3.....	8.....	8.....					
Washington College.....	Harry P. Hopkins.....	No.....	3.....	1.....	75.....	75.....	1 year.....	25.....	7.....		
Presbyterian College of Flor- ida.....	Miss Emily P. Horts- horn.....	Yes.....	1.....	10.....	29.....	39.....	No limit.....				
Cookman Institute.....	Arthur R. Grant.....	Yes.....	1.....	10.....	32.....	42.....	1 month.....	100.....			
Convent of the Holy Names.....	Sister Ignatius.....	Yes.....	5.....	5.....	85.....	90.....		20.....	90.....	6.....	
Washington Seminary.....	J. Fowler Richardson.....	No.....	2.....	3.....	68.....	68.....	9 weeks.....	33.....		20.....	
Perry-Rainey Institute.....	Mrs. Rosa Reid.....	Yes.....	1.....	1.....	17.....	18.....	1 month.....	100.....			
Augusta.....	Chas. A. Dryscoll.....	Yes.....	1.....	2.....			No limit.....	10.....	75.....		
Epworth Seminary.....	Susan H. Breck.....	Yes.....	1.....	1.....	2.....	30.....	32.....	do.....			
Ursuline Academy of the Holy Family.....	Mother Evangelista.....	Yes.....	4.....	4.....	7.....	96.....	103.....	1 month.....	20.....	4.....	
Academy of Our Lady.....	Sister of Notre Dame.....	Yes.....	1.....	8.....							
Kenwood Institute.....	Louise Gertrude Ernst.....	Yes.....	1.....	2.....	9.....	9.....	1 month.....				
St. Joseph's Seminary.....	Sister St. Mary.....	Yes.....	1.....	3.....	2.....	78.....	80.....	3 months.....			
Gittings Seminary.....	Willard R. Stone.....	No.....	1.....	1.....	4.....	37.....	41.....	2 months.....	2.....	6.....	
Wever Academy.....	Katherine M. Powers.....	Yes.....	1.....	1.....	8.....	19.....	27.....	1 year.....	98.....		
Mendota College.....	John A. Wallace.....	No.....	1.....	14.....	20.....	34.....	10 weeks.....	22.....	100.....		
Frances Shimer Academy.....	Sister M. Cecelia Vachon.....	Yes.....	1.....	4.....	3.....	60.....	63.....	12 weeks.....	12.....	100.....	75.....
St. Mary's Academy.....	Mrs. W. C. Paisley.....	Yes.....	1.....	6.....	10.....	90.....	100.....	5 months.....	50.....	50.....	
Pleasant View Luther College.....	Miss Alice J. Brooks.....	Yes.....	1.....	2.....	5.....	19.....	24.....	1 term.....	100.....	3.....	
Bettie Stuart Institute.....		Yes.....	1.....	2.....	2.....	40.....	40.....	do.....	50.....		

TABLE 10.—Statistics of departments of music in secondary schools—Continued.

State and post-office.	Name of institution.	Director of music.	In- cor- pora- ted.	Instructors in music.		Students enrolled in department of music.			Per cent of students com- pleting high school course of 3 years or more.	Per cent of students de- voting less than 5 hours per week to music.	Per cent devoting more than 5 but less than 10 hours per week to music.	Per cent devoting 10 hours or more per week to music.	Graduates in music in last 5 years.	Students not graduates re- ceiving certificates in mu- sic in last 5 years.	Number of volumes in li- brary.	Value of library.
				Male.	Female.	Total.	Male.	Female.								
INDIANA.	Indianapolis.....	Knickerbocker Hall.....														
	Goshen.....	Goshen College.....	No.	1	13	14	1	13	20	20		80	2			
	INDIAN TERRITORY.															
	Minco.....	El Meta Bond College.....	No.	1	2	3	1	2	1	60	40	0	1			
IOWA.	Wynnewood.....	Indianola College.....	No.	1	1	2	1	1	100	100						
	Clinton.....	Mount St. Clare Academy.....														
	Davenport.....	St. Katharines School.....	Yes.	4	87	91	4	87					8			
	Epworth.....	Haus T. Seifert.....	Yes.	1	40	41	1	40	75	80			13			
KANSAS.	Fort Dodge.....	J. W. Crain, M. B.....	Yes.	1	30	31	1	30					7			
	Lyons.....	Gertrude Whiting.....	Yes.	2	15	17	2	15	5	75	25		6	12		
	Vinton.....	Sister Mary Oswald.....	Yes.	5	130	135	5	130								
		Our Lady of Angels Seminary.....	No.	1	24	25	1	24	No limit.	90	10					
KENTUCKY.	Concordia.....	Iowa College for the Blind.....														
	Lawrence.....	Nazareth Academy.....	Yes.	6	120	126	6	120	50	75	25		10	18		
	Newton.....	Hesketh Institute.....	Yes.	1	235	236	1	235	60	100			13		25	\$45
		Bethel College.....	Yes.	2	20	22	2	20								
	Anchorage.....	Miss Stela Robbins.....														
	Boardstown.....	D. A. Hirschler.....	No.	1	18	19	1	18	40	100					10	12
	Clinton.....	Miss Mary P. Lord.....	Yes.	3	35	38	3	35	No limit.	100			2			
	Covington.....	Mrs. Morgan Yewell.....	Yes.	3	36	39	3	36	9 weeks.	100						
	Glenale.....	Notre Dame Convent.....	No.	2	75	77	2	75	5 months.	100						
	Jackson.....	Lynnland Institute.....	No.	2	32	34	2	32	20	90						
	Lexington.....	Lees Collegiate Institute.....	Yes.	1	27	28	1	27	5	100						
	London.....	St. Catharines Academy.....	Yes.	1	24	25	1	24	2 weeks.	100						
VERMONT.	Sue Bennett Memorial School.....	Sister Salesia.....	Yes.	2	60	62	2	60	3	100			1			
	Versailles.....	E. Jeannette Peterson.....	No.	2	48	50	2	48	3 months.	100						
		Lucy A. Putnam.....														

TABLE 10.—Statistics of departments of music in secondary schools—Continued.

State and post-office.	Name of institution.	Director of music.	In- cor- pora- ted.	Instructors in music.		Students enrolled in department of music.		Shortest period for which stu- dents are received.	Per cent of students com- pleting high school course of 3 years or more.	Per cent of students de- voting less than 5 hours per week to music.	Per cent devoting more than 5 but less than 10 hours per week to music.	Per cent devoting 10 hours or more per week to music.	(Graduates in music in last 5 years.	Students not graduates re- ceiving certificates in mu- sic in last 5 years.	Number of volumes in li- brary.	Value of library.
				Male.	Female.	Total.	Male.										Female.	Total.
MISSOURI.																
Boonville.....	Kemper Military School.....	F. E. Miller and Mrs. Grace Johnston.	No.	1	1	2	27	27	20	100						
Clarksburg.....	Hooper Institute.....	Leta Clark.....	No.		1	1	0	12	16	33	50	33				
Conception.....	Conception College.....	Rev. Gregory Hugle, O. S. B.	Yes.	5		8	40		10	100						
Excelsior Springs.....	Haynes Academy.....	Miss Lela Haynes.....	No.		1	1	2	15	10	10	20	70	3			
Farmington.....	Carleton College.....	P. L. McFerrin.....	Yes.	1	1	1	10	40	50	100						
Do.....	Elmwood Seminary.....	Lillie F. Clark.....	Yes.			6	2	120	50	100						
Fulton.....	William Woods College.....	Miss Pearl L. Bird.....	Yes.	6	6	12	79	19 weeks	20	100						
Kansas City.....	St. Teresa Academy.....	Prof. Menton Crosse.....	Yes.	1	2	3	8	50	10	100			40			
Richmond.....	Woodson Institute.....	Mrs. Mary L. Malkoff.....	Yes.	2	2	4	39	58	20				2			
St. Louis.....	Missouri School for the Blind.....			1	2	3		71								
NEBRASKA.																
Blair.....	Dana College.....	Amanda Hansen.....	No.	1	1	1	16	7	23	No limit	4	100	8	131		
Columbus.....	St. Francis Academy.....	Sister M. Agnes.....		4	4	12	64	76								
NEW HAMPSHIRE.																
Andover.....	Praetor Academy.....	Grace F. Currier.....	Yes.	1	1	1	30	30	60	1 year						
Center Strafford.....	Austin Gate Academy.....	George W. Russell.....	Yes.	1	1	1	16	30	46	6 weeks	3	0				
Concord.....	St. Paul's School.....	James C. Knox.....	Yes.	4	4	8	65	65	0							
Exeter.....	Robinson Female Seminary.....	Miss Edith J. Ellis.....	No.	1	1	2	200	0	100	1 year						
Manchester.....	Convent of Jesus Mary.....	St. Anthony of Padua.....	No.	3	3	6	62	65	0	0						
Meriden.....	Kimball Union Academy.....	Mary F. Norcross.....		2	2	4	3	7	10	1 term						
New London.....	The Colby Academy.....	Carlotta E. Gilbert.....		1	1	2	10	11	20	10 weeks	11	80	20			
Tilton.....	Tilton Seminary.....	Beattie M. Willard.....	Yes.	2	2	4	14	66	80	100			5			

TABLE 10.—Statistics of departments of music in secondary schools—Continued.

State and post-office.	Name of institution.	Director of music.	In-structors in music.		Students enrolled in department of music.			Shortest period for which students are received.	Per cent of students completing high school course of 3 years or more.	Per cent of students devoting less than 5 hours per week to music.	Per cent devoting more than 5 but less than 10 hours per week to music.	Per cent devoting 10 hours or more per week to music.	Graduates in music in last 5 years.	Students not graduates receiving certificates in music in last 5 years.	Number of volumes in library.	Value of library.
			Male.	Female.	Total.	Male.	Female.										Total.
OHIO.																
Cincinnati.	Notre Dame Academy.	Sister of Notre Dame.	Yes	1	1	31	31	1 quarter.	40	0	100		1	14		
Cleveland.	University School.	James McCombs.	Yes	2	1	3	30	30	225		30		21			
Columbus.	State School for Blind.	Sister Aloysius.	Yes	5	10	100	125	1 year	20							
Dayton.	Notre Dame Academy.	Bro. Louis Vogt.	Yes	6	4	6			25	100						
Do.	St. Mary's Institute.	Miss N. C. Fisher.	No.	2	2	80	89	3 months	50	20	79	1				
Glendale.	Glendale College.		Yes.	4	4	42	42	42	5							
St. Martin.	Ursuline Academy for Young Ladies		Yes.	2	2	60		1 year	50	100						
Toledo.	St. Johns College and University.	V. Winter, S. J.	Yes.	2	2	60										
OKLAHOMA.																
Guthrie.	St. Joseph's Academy.	Sister M. Evangelista.	Yes	4	4	65	65	5 months	80							
Oklahoma City.	Epworth University.	E. C. Marshall.	No.	3	1	25	102	5 weeks.	10	100		0	4			
OREGON.																
Portland.	St. Helens Hall.	Sister Superior.	No.	1	5	6	72	4 year.	11	100						
PENNSYLVANIA.																
Bryn Mawr.	Baldwin School for Girls.	Luther Conradi.	Yes.	1	3	4	0	10 weeks.	0	100						
Canonsburg.	Jefferson Academy.	T. U. Liggett.	Yes.	2	1	3	40	No limit.	0							
Carlisle.	Carlisle Indian Industrial School.	Claude M. Stauffer.		1	1	400	300	3 years.	0							
Do.	Metzger College.	Miss C. J. Thompson.	Yes	2	2	2	2	9 months	25					2		
Jenkintown.	Abington Friends School.	Miss Uralia D. Matz.	No.	1	1	4	18	22	1 term	11	100		3			
Lititz.	Linden Hall Seminary.	Miss Elsa West Rulon.	No.	1	3	4	46	207	66				17			
Mount Pleasant.	West Pennsylvania Classical and Scientific Institute.		Yes.	2	2	10	56		6	100						
Overbrook.	Pennsylvania Institute for Blind.	David D. Wood.		3	3	6	46	58	84							

Ogontz School.....	The Ogontz School.....	No.	5	3	8	90	90	4 months	50	100							
Pennsburg.....	Parkomen Seminary.....	Yes.	2	1	3	18	75	1 term.	50	100							
Philadelphia.....	Holman School for Girls.....	Yes.	3	3	3	103	103		70								
Scranton.....	St. Cecilia Academy.....	No.	4	4	4	25	100	1 quarter	10								
Sugar Grove.....	Miss Myrtle Scott.....	Yes.	1	1	1	8	22	30	20	10							
Wayne.....	St. Luke's School.....	No.	4	4	4	116	116	6 years.	75	75							
West Chester.....	Darlington Seminary.....	No.	1	4	5	75	75	1 year.	100								
RHODE ISLAND.																	
Providence.....	Miss Wheeler's School.....		2	1	3	19	19	1 year.	60	100							
Woonsocket.....	Sacred Heart College.....		1	1	1	25	25	do.	0	80							
SOUTH CAROLINA.																	
Hartsville.....	Welsh Neck High School.....		2	2	2	3	30	3 months	16								
SOUTH DAKOTA.																	
Canton.....	Augustana College.....	No.	1	1	2	120	80	10 weeks.	10	90							
Gary.....	School for the Blind.....	Yes.	2	2	2	16	8	No limit.	0	55							
TENNESSEE.																	
Jackson.....	Lane College.....	Yes	1	1	1	8	78	1 month	12								
Lynnville.....	Robt. B. Jones High School.....	No.	1	1	1	1	23	1 month	50	0							
Pleasant Hill.....	Pleasant Hill Academy.....	No.	1	1	1	6	20	No limit.	10	80							
White Pine.....	Edwards Collegiate Institute.....	No.	1	1	1	6	20	No limit.	10	80							
TEXAS.																	
Abilene.....	Simmons College.....	Yes.	2	1	3	7	61	1 month	0	100							
Austin.....	State Institution for the Blind.....	No.	5	2	7	90	44		100								
Marshall.....	Bishop College.....	No.	3	3	3	9	43	5 months	0	50							
San Antonio.....	St. Louis College.....	Yes.	3	3	3	40	40	17 weeks.	4	100							
Tehuacana.....	Westminster College.....	No.	1	1	1	4	36	10 weeks.	90	90							
Whitewright.....	Grayson College.....	Yes.	1	1	2	12	58		21	0							
VERMONT.																	
Barre.....	Goddard Seminary.....	Yes.	1	1	2	8	45	1 term.	20	100							
Saxtons River.....	Vermont Academy.....	Yes.	1	1	1	9	13	1 term.	4	100							
VIRGINIA.																	
Claremont.....	Temperance Industrial and Collegiate Institute.....	Yes.	1	1	1	24	30	1 year.	77	20							
Clifton Forge.....	Clifton Forge Seminary.....	No.	2	2	2	6	30	1 month	16	100							
Danville.....	Randolph Mason Institute.....	Yes.	4	4	4	86	86	4 months	75								
Radfordville.....	Miss Hannah M. Bodell.....	No.	1	1	1	10	17	No limit.	50								
Hendon.....	Weldon Seminary.....	No.	1	1	1	11	11	1 term.	20	100							
Herndon.....	Miss Virginia Castleman.....	No.	3	3	3	7	52	12 weeks.	75	80							
Lynchburg.....	Virginia Christian College.....	Yes.	3	3	3	7	52										

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				Male.	Female.	Total.	Male.	Female.									Total.
VIRGINIA—cont'd.																	
Reliance.....	Shenandoah College.....	Beulah E. McNemar.....	Yes.	2	2	4	6	10	16	75	100			16			
Staunton.....	Virginia Female Institute.....	Prof. F. R. Webb.....	Yes.	3	3	6	60	60	60	90	100						
Sweet Briar.....	Sweet Briar Institute.....	Helen F. Young.....	Yes.	2	1	3	34	34	34								
WEST VIRGINIA.																	
Buckhannon.....	Wesleyan College.....	Frederick Benson.....	No.	2	2	4	75	225	300	90	100		12				
Charlestown.....	Powhatan College.....	J. Erwin Price.....	Yes.	1	8	9	110	110	110	25	100		20	10			
Do.....	Stephenson Seminary.....	Mrs. A. B. Harker.....	Yes.	1	1	2	1	43	44	5	100		2				
Clarkburg.....	St. Joseph's Academy.....	Sister J. Aloysius.....	No.	2	2	4	40	40	40	60							
Grafton.....	St. Augustine's School.....	St. M. Genevieve.....	No.	2	2	4	30	32	32								
WASHINGTON.																	
South Park.....	College of Our Lady of Lourdes.....	Miss Lueben.....	Yes.	3	3	6	35	35	35	10							
Uniontown.....	St. Joseph's Parochial School.....	Sister Stanislaus.....	No.	2	2	4	24	54	78								
WISCONSIN.																	
Beaver Dam.....	Wayland Academy.....	Martha K. Roberts.....	Yes.	3	3	6	17	39	56	33	100		8		50	\$50	
Endeavor.....	Endeavor Academy.....	Miss Vera Breton.....	Yes.	1	1	2	22	34	56	10	100						
Evansville.....	Evansville Seminary.....	Anna Boyce.....	Yes.	1	1	2	7	36	43	33							
Fond du Lac.....	Grafton Hall.....	B. T. Rogers.....	Yes.	3	4	7	61	61	61	30	15	23					
Galesville.....	Gale College.....	Arthur Giere.....	Yes.	1	1	2	14	18	32	50	15	23					
Janesville.....	Wisconsin School for the Blind.....	Charles Schaefer.....	Yes.	1	3	4	30	35	65	0	100						
Mount Calvary.....	St. Lawrence College.....	Edward Wentz.....	Yes.	1	1	2	87	5	87	0	100						
Plymouth.....	The Mission House.....	Mother M. Seraphia.....	Yes.	5	5	10	70	70	70	9	0	60	40	20			
Prairie du Chien.....	St. Mary's Academy.....	Wm. J. Shiele.....	Yes.	1	1	2	15	15	15								
Watertown.....	Sacred Heart College.....		Yes.	1	1	2											

IV. PAST AND PRESENT TENDENCIES.

It already has been noted that the development of music education has moved along four lines, namely, in the public schools, by private teachers, in colleges and universities, and in independent music schools. The impulse given by the old singing school, with its crude attempts to teach the reading of music by note to adults, naturally led to efforts in the same direction with children, and music in the public schools was the result. The activity of individuals resulted in a constantly increasing body of private teachers of various instruments and musical theory. This body received many accessions of trained musicians whom the unsettled social and political conditions of Europe sent to this country, and who gained their livelihood by teaching music. The gradual establishment of schools of music and of departments of music in connection with colleges followed, and the movement toward a formal music education was fully launched. Undoubtedly, among these agencies there were many with high ideals and more or less definite educational purposes, but influences were quickly at work which were to give a decidedly wrong bent to music instruction. Composition and performance were the goals toward which all efforts were directed, and with no educational precedents existing for the guidance of those engaged in it, music teaching rapidly became imbued with false ideals, and, in time, the affected virtuoso, the specialist, flourished, finding many disciples, and the purpose of music education steadily narrowed.

It is not surprising, however, that the pedagogic development of music in its earlier stages, under the conditions dominant in a country whose energies were chiefly employed in the expansion of commerce and manufactures, should be lacking in system. When the progress, in the United States, of educational movements generally is considered, it is not remarkable that in an art so elaborate and complex as music confusion should exist and much pioneer work be necessary, and that mistakes both of commission and omission would be made before music education should be fully understood, and the principles on which it should be based be clearly formulated. While the historical statement may indicate the absence of a guiding principle, a lack of unity in effort, and confusion of opinion as to what constituted the true office of music and the real nature of music education, it also supplies evidence that there has been a demand for musical culture, and that those who took upon them the labors of the pioneer perceived this, and, realizing the need for a better education of the people in music, were not astray in their estimate of what that need was. The projectors of the old singing school builded better than they knew when they attempted to initiate the people into the mysteries of musical notation, and gave impetus to an impulse which

was to bear good fruit. Despite their slight musical equipment and the crudity of their instruction, they were keen enough to perceive that music was an important part of the life of the people and could be made more productive of good by educating them in the essentials of music culture. It was the departure from this purpose by those who followed that gave rise to the confusion which so quickly developed as the cultivation of music increased, and that circumscribed the scope of music education, limiting it for many years almost entirely to the field of professional training.

The practice of music, rapidly developing into well-defined specialties, each possessing its own peculiar technique and requirements of instruction, attracted a constantly increasing body of students whose entire attention became more and more absorbed by the form in which they were specially interested. This absorption in some particular manifestation of music produced sharply drawn lines of separation, and caused formulators of methods of instruction to lose sight of two truths which underlie music education equally with other forms, and which must be taken into account by those who would place music where it rightfully belongs in the scheme of public education: First, that to be educationally valuable music must speak a message to the people at large, who must be prepared to understand and appreciate its utterances; and, second, that while there are various forms of musical manifestation they are all branches of the parent music trunk, their fruitfulness depending upon the proper cultivation of the stem from which they derive their life; and whether music be viewed from the standpoint of the creator, theorist, performer, or pedagogue; whether it be taught in the public school, the college, the university, the conservatory, or by private teacher, underlying all instruction are basic educational principles requiring recognition and logical development; and however divergent the activities of the different exponents of music eventually may become, there is a point where their specialization emerges from the parent art.

The failure of musicians to apprehend these truths has constituted the weakness of the educational activities of the past forty years. It was the excessive emphasis placed on the vocational aspect of music, exalting it unduly, which relegated to the background and ultimately obscured that view which sees in music a close connection with social and national life, and opens up a vast field of cultural education in which the people can participate. This restriction of the office of music has come to pass despite the fact that history is replete with illustrations of the intimacy existing between it and personal, social, and national life in the expression of the deeper feelings of human nature. Dominated by this narrow view, the aim of music teaching has been the making of players and singers or the development of composers, and back of the activities of those who

have dictated methods of instruction has been the conviction that peculiar and pronounced talent must determine the advisability of music instruction, those only who are so fortunate as to possess this God-given ability being worthy of serious attention, while for the less fortunate majority music is a sealed book.

This narrowness of outlook and the absence of definite standards of instruction naturally have made themselves felt in music teaching. Specialized forms of study have been thrust upon students almost with the first lesson. Technique became the *sine qua non* of all effort. No provision was made for foundational preparation, and the necessity for any breadth of culture was entirely ignored. Music departments and conservatories became technical training schools, and private teachers emulated their example. Well-defined courses of study, progressing logically and systematically from grade to grade to the point where specialization could properly begin and specific professional preparation be entered upon to advantage, were so rare as to be a negligible quantity in estimating the status of music education, and the correlation of music and nonmusic courses was practically unknown. The status of music in universities and colleges was also unsatisfactory, on account of the reason for its installation being in doubt, some holding that it should be for the purpose of supplying a music education on a somewhat higher level than that furnished by the primary grades, others seeking to secure for it recognition as a professional specialty in common with other specialties of the university system, while the college authorities themselves looked upon it as a good thing for the treasury but of little or no moment in the general scheme of education. Sharp distinctions were drawn between the advocates of music as a part of the public school work and those who, by right of their training and standing as professional musicians, considered themselves the true exponents of music. Lack of coordination and cooperation left a wide chasm between the more elementary work, as carried on in the primary grades, and the advanced courses outlined in colleges and universities.

The result of these conditions was the complete separation of music from general educational thought. Trained educators naturally were quick to perceive the lack of standardization in methods and the pedagogic inefficiency of those to whom the development of music education was intrusted, and of course gave music a valuation no higher than that at which it was appraised by the majority of its exponents. The unscientific character of music teaching, the prevalence of haphazard systems of instruction, and the undue emphasis placed upon the personal equation repelled educators, who accepted the statement of musicians themselves that temperament and natural endowment are indispensable in music education. The fact that

not only the average teacher of music, whatever might be his or her sincerity, was of restricted education and intellectual ambition, but that too frequently music's most prominent exponents were of equally narrow intellectual horizon, strongly militated against music as an educational force. What has been the attitude of organized educational forces toward music is significantly expressed in the oft-repeated story of the principal of a girl's school, who asked a prospective student, "Do you come here to study, or to take music?" However unfair this attitude may be considered by those who, sounding the depths of musical science and art, realize its potentialities, it is apparently abundantly justified by the conditions which have prevailed until within recent years.

Turning from this contemplation of past conditions and tendencies to those of the present, we find many of the evils named still existing. The misapprehension of years is not easily removed, and the segregation of teachers, the absence of standards, and the spirit of specialization arising from the excessive cultivation of music as a vocation, which has dictated the various schemes of instruction for so many years, are conditions not to be quickly overcome. Yet there are abundant indications that influences are now at work which have leavened the lump and are already making themselves strongly felt. There has grown into appreciable proportions a class of musicians who decidedly deprecate the narrowness and inefficiency of the past, and are making strenuous and well-directed efforts to broaden the character and improve the efficiency of music teaching. In the meetings of their associations, in their studios and class rooms, and in print they are carrying on a propaganda which strikes at the root of the evils which have existed for so long a time. Earnest attempts are made by exponents of music education in the public schools, conservatories, and colleges, and among private teachers to get together, to establish standards, to unify courses of study, and to supply missing links in the educational chain. The day of the pretentious virtuoso is past; there is a growing conviction that the long-cherished belief that music teaching should be confined to those who are temperamentally endowed is a serious mistake. The importance of foundational work is being realized, and the beneficent effects upon the musician of a broad culture are becoming more and more appreciated.

Teachers of various instruments and of voice are making systematic efforts to prepare curricula which will be uniform in standard, doing away with the desultory and unregulated methods of the past. Theorists are discussing questions the solutions of which will make for uniformity. Teachers in public schools are steadily seeking to improve both the matter and the method of their phase of music education, rectifying inaccuracies of grading and bridging over the

chasm between elementary and advanced grades. The cultivation of music in its foundational aspects and as a part of the life of the people is being given intelligent consideration. Pedagogic principles as a basis for further development are being given attention, and the trend is strongly toward efficiency, uniformity, coordination, and cooperation.

The body of musicians to be inoculated with sound pedagogic principles and breadth of view is large, many of its members are isolated, commercialism is still strong, and many are yet too much inclined to be satisfied with methods with which they are familiar and too indifferent to take the trouble involved in improvement; but the germ has been implanted, and although it may take time it will do its work.

Perhaps the most significant fact which an investigation of present tendencies shows is the marked change in their attitude toward music of the dominating forces in educational movements to-day, namely, the colleges and universities. While music is still made to feel that it is only tolerated in some institutions, there has come to pass what may rightfully be esteemed a remarkable change of heart upon the part of many institutions of the highest grade and influence. It is clear that the separation between music and general educational thought is not only being rapidly lessened, but that it will completely disappear in a much shorter time than past conditions would warrant one in predicting. The report of an investigation of the present status of music in colleges, conducted by a committee appointed by the Eastern Educational Music Conference,^a gives some exceedingly interesting information on this point. A list of questions concerning the granting of credit for the study of music, both for entrance and during the college course, was sent to a number of leading universities and colleges in various parts of the country, but particularly in New England and the Middle States, where educational precedent is most strong. One hundred and twenty-three replies were received. Fifty-eight institutions do not maintain music departments. Of these, 15 give the following reasons for the absence of such departments: No means, 8; no demand, 3; music not a collegiate study, 3; lack of time, 1. New York University replies: "If we were given an endowment for such courses, we should offer them gladly." Of the remaining 65 institutions, 58 give credit for the study of music, either at entrance or during the course leading to a degree, or both. Among the institutions granting credit in music both for entrance and toward a degree are Amherst, Barnard, Beloit; College of St. Angela, Colorado; Columbia University, Cornell University, Harvard University, Oberlin,

^aThe full report can be obtained by addressing Prof. Leonard B. McWhood, Columbia University, New York City, N. Y.

Radcliffe, Smith, State College of Washington, Syracuse University, Tufts, Westminster, and Wilson.

Those that grant entrance credit but not toward a degree are Leland Stanford University, University of North Dakota, and University of Tennessee. The first of these has no department of music, and its recognition (August, 1907) of the value of entrance credit in music to the amount of three points out of fifteen required is significant.

Among the institutions that grant credit toward a degree but not at entrance are the Universities of Arkansas, Colorado, Idaho, Illinois, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, Oklahoma, Oregon, South Dakota, Washington, West Virginia, and Wisconsin; Dartmouth and Mount Holyoke colleges, Northwestern University, Ohio Wesleyan University, University of Nashville, Vassar and Wellesley colleges, Yale University, and Converse College.

The subjects for which credit is given, and the number of colleges granting such credit, are as follows:

Branches in which credit is allowed.	At entrance.	Toward a degree
Musical appreciation, including history of music, etc.....	9	42
Harmony.....	18	47
Counterpoint, including fugue, etc.....	9	33
Composition, including form, etc.....	0	18
Practical music (performance).....	10	21

The significance of these figures lies in the fact that these credits are for the degree of bachelor of arts or its equivalent, and not for professional courses.

V. CONCLUSION.

It is clear that the present status of formal music education is one of transition. With many independent schools of music, colleges, and universities offering well-conceived music courses of high standard, there is still lacking the unity and complete coordination of effort that should characterize a well-grounded scheme of education. The courses of each institution follow each other sequentially, but no uniform standard is maintained by which their relative merit and adaptability can be assured, and which will unify the work of all institutions offering such courses into a thoroughly organized system. Each school is a law unto itself; hence when a student presents credits from one to another there is no basis of agreement as to the value of such credits. Secondary schools, which in general education take care to have their courses closely articulated with those of institutions of higher education, attempt the same grade of music instruction

as the best equipped conservatory or college. There are no secondary music schools. A well-defined, properly regulated development of music education from its most elementary to its highest grades does not yet exist.

Music needs the college atmosphere, its spirit of culture, and its well-directed effort. It needs the application to its methods of the system and orderliness that characterize college work. These need not, and will not, check its artistic attributes, but they will bring to it system in classification and thoroughness and accuracy in the coordination of its elements. That such a consummation will be reached present conditions give basis for belief.

If this investigation of present conditions in formal music education reveals weaknesses in organization and misdirection of effort, it also shows decided gains in many essentials of future development. It discloses great musical activity in colleges and universities, and by its revelation of the critical attention now paid to the preparation of music courses and their correlation with other subjects of the curriculum, it gives encouragement to musicians to redouble their efforts for the elevation of standards of musical scholarship in all its phases.

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EDUCATION IN FORMOSA

By JULEAN H. ARNOLD

AMERICAN CONSUL
TAMSUI, FORMOSA



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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
Washington, June 25, 1908.

SIR: The manuscript which I am transmitting herewith, on Education in Formosa, was prepared by Mr. Julean H. Arnold, American consul at Tamsui, Formosa, and was sent by him to the Department of State. Through the courtesy of the Smithsonian Institution, to which office the paper had been transmitted by the Department of State, I have secured it for publication in the Bulletin of the Bureau of Education, and have the honor to recommend that it be published as one of the numbers of that Bulletin for the current year.

The special interest attaching to this report of Mr. Arnold's arises from the fact that the educational campaign of the Japanese Government in Formosa, which he describes with careful attention to essential details, offers a significant parallel to the educational campaign which our Government is conducting, at no great distance from Formosa and under somewhat similar conditions, in the Philippine Islands.

Very respectfully,

ELMER ELLSWORTH BROWN,
Commissioner.

The SECRETARY OF THE INTERIOR.

PREFACE.

With Japan and America entering the ranks of the colonizing powers, the question of colonial education becomes particularly important, especially so in view of the fact that education in both Japan and America occupies a commanding position. It is rather significant that the two great Pacific powers should have become colonizing nations within three years of each other.

It is the purpose of this monograph to set forth the results of Japan's efforts to establish an educational system in Formosa, her first colonial possession. In order that we may fully understand the nature of the problem with which she has to contend, I have attempted to describe somewhat fully the work of her predecessors in the island, the Dutch and the Chinese. Thus the monograph has naturally resolved itself into a history of education in Formosa. While I have touched upon the subject of education in both China and Japan, I have made no effort to describe conditions as they obtain in those countries. For such a description the reader is referred to Mr. Robert E. Lewis's admirable book, *The Educational Conquest of the Far East*.

For much of my material I have to acknowledge my indebtedness to the Rev. William Campbell's work, entitled "*Formosa under the Dutch*," and to the official publications of the Formosan government. I am especially indebted to Mr. Mochiji, director of education in Formosa, and to Mr. Ogawa, his very able assistant, for their extreme kindness in affording me every possible opportunity to study conditions at first hand.

JULEAN H. ARNOLD.

AMERICAN CONSULATE,
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EDUCATION IN FORMOSA.

I.—EDUCATION UNDER THE DUTCH.

1. THE DUTCH EAST INDIA COMPANY.

To Holland the island of Formosa is indebted for its first schools. In the early part of the seventeenth century, when the Dutch West India Company was establishing trading posts and appropriating to itself lands upon the American continent, the Dutch East India Company, unsuccessful in its efforts to drive the Portuguese from Macao or to secure trading privileges upon the China coast, established itself without opposition in the southern part of Formosa. This company claimed the island by virtue of an agreement with China and proposed to make it a valuable trading post. Instead of laboring to gain the friendship of twenty-five or thirty thousand Hakka Chinese residents in the island, or that of a handful of wealthy Japanese traders, already there, they wisely courted the good will of the aborigines who owned the territory upon which they settled. They began to trade with these natives and to colonize the country. They soon discovered that their influence with the aborigines could be rendered more effective and their trade relations extended by converting them to Christianity. Accordingly, in 1627 George Candidius, under appointment from the Dutch Government, joined the Dutch Company in south Formosa to engage in religious and educational work among the native tribes.

2. THE INHABITANTS OF SOUTH FORMOSA.

In his account of the inhabitants, Candidius describes the natives as a savage and barbarous people, the men tall and robust and the women short and stout. The color of their skin resembled that of the East Indian. The men went about in the summer naked, while the women, upon certain occasions, exhibited no shame in going about in a similar state. Different villages often spoke different dialects and were at continual warfare one with another. The people were as a rule peacefully disposed toward foreigners and often very hospitable. They showed no desire to cultivate their fields further than was neces-

sary to gain a meager subsistence, although their lands were extremely fertile. The women did most of the farming, while the younger men seldom or never engaged in tilling the soil, their only work consisting in hunting and fishing. The older men worked in the fields, but not in the same fields with their wives, until after their fiftieth year, nor did they live with their wives after having attained that age. Adult males, until their fiftieth year, lived in villages, separate from the women, stealing over at night to visit their wives. Although a woman married young, yet it was considered a sin for her to give birth to a child before her 37th year.

The men married after attaining the age of 21, and as a rule married but one wife, although fornication and adultery were not considered sins. According to Candidius, a village had no headman or chief, but was ruled by a set of 12 councilors, chosen from among the male members of the tribe of upward of 40 years of age. Contemporaneous records, however, point to the fact that custom in the different villages varied in this particular, for instances are cited in which villages had their chiefs and headmen. The councilors were in reality little more than police officers, their duties consisting in seeing that the customs and ceremonies of the village were properly observed and that the commands of the priestesses were respected. Theft, murder, manslaughter, and adultery were not punishable by law, but custom decreed that the offended party or his relatives might seek personal revenge by taking possession of certain property of the offender in retribution. For instance, should a man have discovered another in adultery with his wife, he was entitled to take from the offender two or three pigs.

Candidius further states that, although these aborigines were unable to read or write, yet they had a form of religion which had been handed down through successive generations. They acknowledged many gods, among which were two principal ones. Priestesses acted as interpreters for their gods and performed the sacrificial rites. These priestesses also assisted in the burial ceremonies, which were very elaborate and which lasted many days. The bodies of the departed were submitted to a slow process of toasting for a period of nine days, during which time the relatives indulged in much feasting. After three years the skeletons were buried. According to common belief, the soul after death met with either punishment or reward.

In warfare these natives were treacherous and cruel. Their weapons consisted of swords, spears, and shields. They avoided open warfare, preferring to secure by stealth or cunning as many of the heads of the enemy as possible. The securing of a head was an occasion for great rejoicing, and after the flesh was boiled off the skull was preserved as a trophy. Although the member of the tribe who could display the greatest number of these trophies was held in high esteem

by his fellow-tribesmen, yet the only mark of respect recognized by all was that to which one was entitled by virtue of seniority.

These tribes were, according to most writers, of Malay type, and undoubtedly related to tribes inhabiting the Philippines. The Dutch describe them as being superior to the Chinese with whom they came into contact, but these opinions were, without doubt, influenced by a prejudice against the Chinese resident in the island.

3. BEGINNINGS OF DUTCH MISSIONARY WORK.

After Candidius had learned the language of the natives, he applied himself assiduously to the task of bringing them into touch with the doctrines of Christianity. Meanwhile helpers were sent from Holland to assist in the missionary work. All educational work undertaken by the Dutch in Formosa was done in the interests of the Dutch church. Instruction was based upon the catechism, the Lord's prayer, and certain sermons. As the natives were divided into many tribes, no two under the same chief or headman, and as they had no literature or teachers to propagate their creeds, it was deemed a comparatively easy matter to replace their religion by that of Christianity. Naturally schools became a necessity, in order that the people might learn to read and write their own language, that it might serve as a medium for the propagation of the tenets of the Christian faith.

4. SCHOOLS FOR THE ABORIGINES; METHODS OF INSTRUCTION.

It is recorded that a school of 70 boys was opened in the year 1635 under a Dutch instructor who endeavored to teach the natives to read and write their own language in roman letters. By the year 1645 there were schools established in seven or eight different villages. About 600 boys and girls were in attendance in these schools, committing to memory a prescribed catechism, the Lord's prayer, and other religious texts. It appears that but few were taught to write, for in a school of 80 pupils only 17 were being taught to write, in order that they might be trained as native teachers. Attendance in the schools was compulsory, although this was contrary to the wishes of the parents, who preferred that their children be permitted to work in the fields. For this reason it was often necessary to distribute food and clothing among the pupils, in order to compensate for their attendance at school. During one year 471 garments and about 385,000 pounds of rice were distributed among 500 pupils. The Dutch teachers complained that the use of the ferule only tended to encourage the pupils to run away from school; in fact, in the Rev. M. Junius's recommendation that a number of native students be sent to Holland for training as clergymen, one of the reasons he assigned

was that it was difficult to keep the pupils in the schools sufficiently long to make them of any value to the church, while in Holland they might be chastised without fear of their running away. Besides the subjects above mentioned, pupils were also instructed in singing. Schools for adult instruction were maintained, and attendance at church was made compulsory. The Sabbath was observed with strictness. All instruction was carried on in the native dialect, although it was proposed from time to time to introduce the Dutch language into the schools.

The school-teachers were for the most part Dutch ex-soldiers, who after teaching for a short period were elevated to the position and rank of schoolmaster. It appears that a mistake was made in elevating these soldiers to such positions, for the Formosa Consistory itself admitted that little confidence could be reposed in the Dutch schoolmasters. In the council for Formosa's report to the president and councilors of the government of India, in October, 1645, it was stated in criticism of the conduct of the ex-soldier schoolmasters that "the greater number were guilty of drunkenness, fornication, and adultery; in fact, led most scandalous lives, so much so that hardly a fourth came up to our expectations." By 1644 there were 50 trained native school-teachers, who received from the treasury of the company 1 real each a month, in addition to rations of rice which the villagers were in duty bound to contribute. It is said that the majority of these were able to read and write. In 1645 it was deemed wise to decrease the number of native schoolmasters to 17, and to advance their pay fourfold, in order that they might be free to give all of their time to their work, instead of being obliged to devote a portion of it to work in the fields.

5. RULES FOR IMPARTING RELIGIOUS INSTRUCTION.

Up to 1651 the clergy and judiciary were linked together, the latter being subservient to the former. By order of the governor-general and councilors in 1651 the clergymen were discharged of all civil and judicial services, in order that they might devote themselves more uninterruptedly to the conversion of the heathen; but the schoolmasters still remained under the direct control of the clergy and beyond the jurisdiction of the judicial functionaries, which fact led to considerable friction between the civil and ecclesiastical authorities, the former contending that a bad schoolmaster often found shelter and protection under the wings of the clergy, thus evading punishment. In the year 1657, by recommendation of the consistory of Batavia, the consistory in Formosa drew up a set of rules intended to establish a more concise and more uniform method of imparting religious instruction. These rules were as follows:

First. That in the school for adults and young people the following only need be learned by heart, namely, the two well-known catechisms, the smaller con-

taining thirty-nine and the larger sixty-nine questions and answers; the Lord's Prayer; the Creed; the Ten Commandments; the prayers to be used before and after meals, as also the morning and evening prayers. In connection with this it should be observed that in no case whatsoever shall anyone be obliged to learn both catechisms by heart, but only one; adults the lesser one, as they know it only; and the younger natives the larger catechism, as they till now have learned from it and have already committed the greater part of it to memory.

Secondly. That no scholar shall be obliged to learn more than the things which have just been mentioned, and that none of them need be burdened with any explanations or expositions in connection with the larger or the lesser catechism, except it be out of school hours.

Thirdly. That all clergymen, catechists, and schoolmasters shall do what they can to promote the knowledge of saving truth by giving proper instruction from the catechism both to old and to young, not only in the churches and schools, but also in the dwellings of the natives.

6. PROPOSED COLLEGE FOR TRAINING NATIVE CLERGY.

During the same year it was also proposed to establish a college for the training of a select number of native clergymen. In proposing a site for the building, one of the important considerations appears to have been the selecting a place hedged in by the junction of two rivers of "rapid current and great depth," in order that these might act as a barrier to prevent the escape of the students. It was intended to select the thirty prospective students from as many of the different villages as possible. It was desirable that they should be of good character, and possess good memories and quickness of apprehension; be between 10 and 14 years of age, well acquainted with reading and writing, and preferably from among the children of the poor. As to the plan of instruction, it was proposed that they be taught in the Formosan language in the morning and in the Dutch language in the afternoon. For the Dutch language a book written by Comenius, called the "Door or Portal to Language," was recommended. As to the internal management of the seminary, the following rules were proposed by the consistory:

1. That the subdirector shall have all the young people up in the morning before sunrise; see that they properly dress, wash, and comb themselves, and then arrange for morning prayers being read, all present reverently kneeling.

2. That before and after the usual lesson prayers shall be said or read.

3. That at meals—breakfast, dinner, and supper—a blessing shall first be asked and afterwards thanks returned.

4. That while dinner and supper are being partaken of a chapter from the Bible shall be read aloud.

5. That the young people in rotation shall read a chapter during dinner and supper, and observe the same order with the prayers before and after meals and lessons.

6. That no young person shall be allowed to leave the seminary without the special permission of the director.

7. That the subdirector shall not be allowed to give more than a blow with the ferule by way of punishment in case of misbehavior.

8. That the young people who remain out longer than the time permitted shall be punished as the director thinks fit.

9. That every day two monitors shall be appointed from among the young people by turn, whose duty it will be to note those who speak any other language than Dutch during college time, or who do not behave properly, and report their names to the subdirector.

10. That the subdirector shall take special care in having the clothes of the children kept neat and clean, the building itself properly cleansed, and all things looked after that may tend to the advantage and well-being of the institution and its inmates.

Although this institution never became a reality, owing to the impending conflict with the Chinese, yet these proposed regulations serve to show the Dutch methods of dealing with the native pupils after thirty years of experience.

Although thousands did "give their names to Christ," and hundreds were enrolled in the schools as a result of the labors of the Dutch missionaries and teachers, yet it appears that but few understood the meaning of the religious formulæ which they had committed to memory, and that the number who had remained in school sufficiently long to learn to write was comparatively small. The remarkably large attendance at both church and school was in response to aggressive methods and was undoubtedly inspired by fear of the Dutch authorities. But in the light of that day, the methods of the Dutch were not unusually severe.

7. RESULTS OF THE LABORS OF THE DUTCH.

As for results, one must be impressed by the extent of the achievements of these missionaries, especially when one considers the difficulties under which they labored. They were obliged to conquer a half dozen different Malay-Polynesian dialects. They were not free to give their entire attention to ecclesiastical and educational work, for they had come out primarily to serve the Dutch East India Company. This company, owing to lack of funds and scarcity of men, pressed them into service in civil and judicial capacities in addition to their other duties. As soon as the Dutch missionaries and teachers had learned the language and customs of the natives, they became especially useful to the company as collectors of taxes, interpreters, judicial functionaries, and even as tradesmen. Furthermore, they were obliged to serve as pastors to the Dutch colony. It appears that the Dutch company spent something like 20,000 guilders a year on missionary and educational work, and as they zealously guarded their own interests, they made religion and trade go hand in hand, the one serving the other. Furthermore, the clergy were often at the mercy of the caprices of the civil authorities, for the proposals of the consistory were subject to rejection by the Formosan council. There were also external causes which tended to interfere with the labors of the mis-

sionaries, principal among which was the opposition offered by the Japanese resident in the island.

In spite of these difficulties and in spite of their own shortcomings, their thirty-five years' labors among the natives had a beneficent effect. They found the people ignorant of letters and addicted to many evil practices, and they left them a written language and improved social customs. But the rapid influx of Chinese into the island, following the departure of the Dutch, gradually obliterated many of the good effects of the Dutch influence. According to Rev. William Campbell, one of the leading present-day authorities upon matters pertaining to the descendants of these tribes, the practice of abortion appears to have died out entirely. "As to religion, indications were found among several tribes of a belief in evil spirits, and in one supreme spiritual father, but no stated rites seem to be observed." The Reverend Campbell further states that about twenty-five years ago he was told by a Chinese friend in Kagi city of an aboriginal tribe in the east which practiced a kind of baptism of infant children, and the report appeared to him so trustworthy and circumstantial that he was led to conclude that this must be some genuine survival of the missionary work of two hundred and twenty years ago. Of equal interest is the fact, as cited by the same authority, that numerous manuscripts in romanized Formosan lately found in the island are dated about the beginning of the nineteenth century, thus proving that the art of reading and writing was handed down through successive generations by the people themselves. Mr. Ogawa, acting superintendent of education for Formosa, states that there exist to-day descendants of these tribes who still employ the roman characters in writing.

II.—EDUCATION UNDER THE CHINESE.

1. KOXINGA AND HIS SUCCESSOR.

With the downfall of the Ming dynasty in China, a large influx of Ming loyalists into Formosa made possible the passing of the island into the hands of the famous Chinese pirate chieftain, Koxinga, who had scarcely established himself as ruler of Formosa when he died. It is recorded of Cheng Ching, his son and successor, that he ordered schools to be established in every district throughout the island. Examinations for civil positions were part of Cheng Ching's educational programme. As he ruled for but a few years, it is not to be supposed that his educational measures were effectively carried out.

2. CONDITIONS IN FORMOSA WHEN IT BECAME A CHINESE POSSESSION.

When in 1683 China took possession of Formosa, instead of setting up a colonial government she made it an integral part of the Chinese

Empire, and for upward of two centuries governed it as a prefecture of Fukien Province. The influx of Chinese into the island was so rapid that by the middle of the eighteenth century the Chinese population was estimated at more than 1,500,000. This population was made up of discordant elements. The first Chinese to settle in the island were the Hakkas, a courageous and industrious people. They were treated in China as barbarians, hence a number of them had sought refuge in Formosa before the Dutch came to the island. The Fukienese Chinese, who since the beginning of the eighteenth century had made up the bulk of the island's Chinese population, were never peacefully disposed toward the Hakkas. The so-called Ming loyalists, whom the establishment of the Manchu dynasty had driven from the coast of South China to Formosa, never seemed to miss an opportunity to assist in setting up an independent government in the island. Bands of brigands and pirates infested the country during the whole of the Chinese régime. The official classes in the coast towns of China found Formosa a splendid dumping ground for undesirables. The savage tribes inhabiting more than one-half of the island had always to be taken into account. Some of the peaceful lowland tribes, including a number of those who had come under the influence of the Dutch, were gradually absorbed by the Chinese and adopted Chinese customs. But the greater portion of the savage population never, during the whole of the Chinese occupation, relinquished control of the entire eastern half of the island, where they remained a constant menace to the peaceful exploitation of the lands in proximity to their territory. That the Chinese rule had not succeeded in reconciling these discordant elements or in putting down brigandage or piracy, is evidenced by an almost unbroken series of insurrections, rebellions, interclan feuds, and depredations of bands of brigands and pirates during the whole of the Chinese régime.

In the face of these disturbing elements it is not to be expected that much was done in the way of establishing schools and affording the masses opportunities for education. In fact, up to the time that Formosa was made a separate province and placed under the rule of the progressive governor, Liu Ming Chuan, in 1885, the educational administration on the island, as well as the general civil administration, was indeed lax.

The educational problem with which the Chinese administration had to contend naturally divides itself under two heads, namely, (1) education of the Chinese, and (2) education of the aborigines.

3. EDUCATION OF THE CHINESE.

(a) OBJECT OF EDUCATION.

The object of education in Formosa, as in China, was to prepare candidates for imperial examinations. As these examinations always

presupposed a knowledge of the Chinese classics and Chinese ancient history, the government and private schools shaped their courses accordingly.

(b) SYSTEM OF CONTROL.

The Chinese system placed education under the control of the provincial authorities. In making Formosa a prefecture of Fukien Province the question of furnishing educational facilities to the Chinese was greatly simplified. Local conditions naturally made certain departures from the regular system obtaining in Fukien Province proper inevitable. Being divided from the mainland by an intervening channel 100 to 200 miles in width, it was found to be inconvenient to place the control of educational matters in the island with the governor of Fukien, who was ex officio director of education for his province. At first the taotai of Amoy was made ex officio director of education. In 1728 the inspector of the administration of the island of Formosa added to his other duties that of director of education, but in 1752 the office passed to the control of the taotai of Tainan (Formosa). In 1875 the governor of Fukien established the custom of spending a portion of the spring and autumn of each year in the island, and from that time the duties of director of education devolved upon him.

The system of government education, if it might be called a system, included prefectural, district, and elementary schools. In proportion to the population these were few indeed, and the greater portion of the work done remained for the private school. The efficiency of the system, judged from a Chinese view point, depended upon the character of the local administration. The history of the island, while a prefecture of Fukien Province, shows little evidence of enlightened and public-spirited service on the part of the local officials.

(c) ESTABLISHMENT OF PREFECTURAL AND DISTRICT SCHOOLS.*

In 1686 the Taiwan-fu Prefectural School, afterwards known as the "Head School of Formosa," was opened, the governor having repaired for that purpose the old district school established by Cheng Ching. This building was in reality a Confucian temple, with two rooms set aside for school purposes. The number of students was limited to 20, and the teacher's salary fixed at 45 taels per year. About the same time there were established two district schools, one in the city of Tainan and the other at Kyuzo (about 8 miles north-west of the present Hozan). The number of students allowed in these two schools was 10 and 15, respectively. The prefectural and district

* For a detailed list of schools established during the Chinese régime, see Table 1, page 27. We are not to suppose that all of the schools enumerated in this list were maintained until the coming of the Japanese, for local disturbances were of too frequent occurrence to make such probable.

schools were supported by the house tax and by revenues from adjoining lands belonging to the schools. Repairs and building improvements were met from time to time by subscriptions from official and private sources.

The duties of the teachers were described as follows:

1. To have control of the Temple of Sages connected with the school.
2. Instruction, examination, and promotion of pupils.
3. Inspection of private schools.

In 1725, after a severe rebellion had been put down, Governor Lu Chow issued a proclamation recommending the establishment of free schools throughout the island, contending that they would be of great assistance in teaching the people obedience and in exerting a beneficent influence in checking tendencies to rebellion. Although no substantial improvement resulted from the governor's well-intentioned proclamation, yet its issuance shows a recognition of the possibilities of a general education.

(d) THE IMPERIAL EXAMINATIONS.

Probably a still better token of the recognition of the efficacy of learning is shown in the attitude of the authorities in securing for the island proper recognition in the imperial examinations. As a prefecture of Fukien Province, Formosa was entitled to the preliminary examination which was held by the provincial literary chancellor once each year. The successful candidates were entitled to appear for the triennial examination at the provincial capital, Foochow, where, owing to the fact that but a limited number of degrees were to be conferred, the few candidates from Formosa stood a very poor chance among the vast number from all over Fukien Province proper. In 1688 the commander of the army in Formosa, by representations to the Throne, secured for the island the opening of a special list of candidates, whereby one degree was allowed, but in 1692 this special favor was withdrawn. In 1730, as a result of representations from the inspection of education, an imperial decree provided a special list of candidates for the island and one degree. Six years later the number was increased to two. In 1808 the Emperor Chia Cheng conferred upon the residents of Formosa a special favor by extending the number of degrees to three. This favor was the result of overtures made by the governor after a tour of inspection throughout the island, in which he represented that it was due to the patriotic motives of the rich residents of the plains that a volunteer force was raised in Formosa capable of putting down the piratical bands which up to that time had ravaged the coast towns. In all probability the rich merchants were inspired by motives of self-protection rather than patriotism; but this was an easy method of re-

warding them for their services, as the favored sons of these rich residents might thus rise to positions of influence and power. In 1829 the Emperor Tao Kuang, upon a similar pretext, increased the the number of degrees to four. Between the years 1874 and 1894 nine Formosan students received the third degree in the imperial examinations in Peking.

The Emperor Tao Kuang had undoubtedly been greatly impressed by the lawlessness existing in Formosa, for during his reign he ordered that the Sacred Edict (the sixteen moral maxims of the Emperor Kang Hsi) be read upon the 1st and 15th days of each month throughout the towns and the country districts of the island, instead of being read simply in the larger cities, as formerly obtained. He hoped thereby to instill in the minds of the inhabitants obedience and reverence for learning.

It was not until the year 1875 that China gave to Formosa any serious consideration. From that time the governor of Fukien was ordered to reside in the island a certain portion of each year, that he might render to the island more effective service. By 1884 matters in Formosa assumed sufficient importance to entitle the island to a separate provincial administration, and upon Liu Ming Chuan was conferred the honor of being the first governor of Formosa.

(e) WORK OF GOVERNOR LIU MING CHUAN.

During the entire history of the Chinese administration in Formosa all that is worthy of the name of education was the work of one man, namely, the enlightened Governor Liu Ming Chuan. In 1885 this progressive official, quite in advance of his colleagues in similar posts in China, inaugurated a system of reforms which bade fair to place Formosa in advance of China proper in administrative measures. Among his reforms was the establishment in Taihoku, the capital city, of a school for western learning. An Englishman, a Dane, and a Chinaman educated abroad were retained as teachers, and modern educational methods substituted for the old fossilized system of instruction. As the wholesome effect of the administration of one progressive official in China is often obliterated by the reactionary measures of a nonprogressive successor, so in this case the good beginnings made by Governor Liu Ming Chuan toward instituting modern education in Formosa came to naught through the indifference of his successor a few years later.

(f) PRIVATE SCHOOLS.

As the public and prefectural schools did very little for education, it was the private school upon which in Formosa, as well as in China proper, education really depended. A glance at the list of so-called government schools (Table 1) and their student enrollments will

readily convince one that these schools did not pretend to reach the masses. Accurate statistics as to the number of private schools and the student enrollment in such schools during any period of the Chinese régime are unobtainable. It is to be presumed that there was in Formosa a less proportionate number of children receiving an education than in China proper.

Private schools in Formosa, as in China, were opened in the following ways: (1) Several families or members of a community combined, rented quarters, and hired a teacher; (2) individuals or societies, philanthropically disposed, hired a teacher and opened a school; (3) wealthy individuals retained tutors for their children; (4) a scholar established himself in a village and received pupils for such fees as their families could afford to pay. The private schools aimed either to give a knowledge of reading and writing the characters or to prepare pupils as candidates for the government examinations. Those who attended for the first purpose studied from two to eight years, while those who were destined to prepare for the examinations remained in school for upward of ten years. The course of study included reading from the Chinese classics and the Four Books, writing Chinese characters, composition, and versification.

The pupils had no definite school hours, it being understood that the services of the teacher were to be devoted to teaching from sunrise until sunset. Those retaining a teacher seemed to be bent upon securing as much of his time in actual schoolroom work as the light of day would permit, while those sending children to be instructed were equally inconsiderate in the demands made upon these children. A pupil's daily schedule was something after the following manner:

6 to 7 a. m. Recitation (recite lesson of previous day).

7 to 8.30. Breakfast at home.

8.30 to 10. Read and recite portions of classics while teacher paraphrases.

10 to 12. Writing.

12 to 1.30 p. m. Luncheon at home.

1.30 to 3. Writing.

3 to 4 or 5. Reading.

The more advanced pupils worked by themselves, the teacher acting merely as guide.

The ordinary private school provided for 10 to 20 pupils and was managed by one teacher. There were no classes, each pupil constituting a class by himself. The class room served also as the teacher's private quarters and he was responsible for its upkeep. The room was provided with a tablet to Confucius or an image which was placed at the front. Desks and chairs were furnished by the pupils, who took them away at their departure. The private schools were supported by entrance fees, tuition fees, presents on festival days,

and presents in kind. The entrance fee ranged from 5 cents to 50 cents and was sent to the teacher as a present. The tuition fee was no fixed amount, but varied according to the ability of the parents to pay. This fee increased with the number of years' attendance of the pupil. Ordinarily the fee was about 50 cents a year for new pupils and 75 cents for more advanced students. The presents made upon the four festival occasions were about equal in amount to the entrance present. When the tuition fees were not paid in full, it was the custom to make presents in kind, consisting of vegetables, charcoal, peanut oil, and tea. Thus the income of the private teacher depended upon the number of his pupils and the financial status of their parents. This income ranged from \$15 or \$20 to \$100 a year.

The greater portion of the pupils who attended the private schools dropped their schooling after two or three years of study, the parents being contented if their children had gained a superficial knowledge of the Chinese characters, as this was, in reality, rather serviceable. One of the features of the Chinese school which brought it into favor with the parents was the fact that each pupil was a class unto himself; hence the parents were privileged to utilize the services of their children whenever they wished, as taking them out of school did not interfere with the work of the other pupils. In fact, so long as the teacher received the pupil's tuition fee he was not particularly anxious to encourage regular attendance at school.

It is worthy of note here that neither the public nor private schools made any provision for female education, while the private schools were established only for the Chinese, the savages being entirely dependent upon the government schools especially provided for them.

4. EDUCATION OF THE ABORIGINES.

(a) FIRST ATTEMPTS.

A Ming loyalist, Chen Lao Wen, came to Formosa in 1662 to avoid living in China under a Manchu dynasty. For twenty years he lived with the Mekawan savage tribe and taught their children to read and write Chinese, also administering Chinese medical treatment to the elders of the tribe.

It was not until thirty-four years later, 1696, that the Chinese administration in Formosa took up the work of educating the savages. We have already noted the remarkable work done by the Dutch missionaries toward Christianizing the aborigines of southern Formosa. Up to the year 1875 the educational work of the Chinese among the savages was confined to those tribes whose ancestors had been under Dutch influence. In 1696 there was established in the vicinity of Taiwan City by the Taiwan prefect a school for savages.

There was one teacher appointed to this school, and the Three Character Classic and the Four Books were introduced as text-books. The course of study was similar to that pursued in the Chinese private schools—that is, reading and writing the Chinese characters was the main consideration. Food and books were supplied free to the pupils to encourage their remaining in school, and they were provided with calendars that they might become familiar with the Chinese New Year and feast days. In 1728 it was recorded that the condition of the savage children who were brought under the influence of this school had greatly improved by virtue of their Chinese acquisitions.

(b) SCHOOLS ESTABLISHED IN 1735.

It was not until the year 1735 that any serious attempts were made to educate any number of savage children. In that year, according to record, about 50 schools were opened among tribes whose ancestors had a century before received instruction from the Dutch. Many of the children, even at that date, had been taught by their parents to write their own language in roman characters. These children naturally found it difficult to familiarize themselves with the Chinese characters, and often used the roman letters to aid them in memorizing the pronunciation. The authorities, fearing that the use of the roman letters might militate against the acquirement of Chinese, actually prohibited their use.

A Chinese scholar was appointed for each of the 50 schools. Trained teachers were unknown under the Chinese system, as it was presumed that any one with the attainments of a scholar was able to impart his knowledge to others. The course of study prescribed for these schools was quite similar to that which obtained among the Chinese. The assistant teacher in the Taiwan Prefectural School was made inspector of savage schools, and it was his duty to report each season upon the progress of savage education. At the end of the year 1736, this inspector reported that "each savage child in these schools is able to read the Four Books and simple poems without any provincialisms, and their writing is proper." This report was undoubtedly too sweeping in its generalizations, yet it is evident that the educational work among the savage children at that time made far more progress than at any other period during the whole of the Chinese régime, with the possible exception of that under Governor Liu Ming Chuan, one hundred and fifty years later. The remarkable progress of savage education in the early half of the eighteenth century was undoubtedly due to the fact that the savage tribes with which the Chinese came into contact were at that time more peacefully disposed toward them than at any subsequent period. The children had voluntarily adopted the Chinese dress and wore the queue.

Like many things Chinese, this educational work among the savage tribes, so well begun in 1735, was destined through the lack of proper attention to deteriorate and lapse. By 1751, its efficiency had been reduced to such an extent that when the Kamaran tribe, near Gilan, north Formosa, came under Chinese influence that year, no efforts were made to establish schools among them. From 1736 to 1875, there appears to have been little or nothing done to extend the education of the savage tribes. Many of the Pepohuans (peaceful savages) had, during this time, through continuous intercourse with the Chinese, gradually become "Chinesed," adopting the Chinese dress, manners, and language. The savage schools in south Formosa lapsed.

(c) EDUCATIONAL WORK AMONG THE TRIBES IN THE EAST AND SOUTH.

In 1875 when the opening up of the southern and southeastern portions of Taito Prefecture was undertaken, a plan for the education of the savages of this district was drawn up. A special text-book, *Proverbs for the Instruction of Savages*, was compiled, and, after inspection by the viceroy of the Liang Min Provinces and the governor of Fukien, adopted. The establishment of schools to carry out this plan marks the first attempt upon the part of the Chinese to educate the "untamed" tribes. The policy of the Chinese administration up to that time had been to regard the eastern half of the island, the portion inhabited by the untamed savage tribes, as beyond the administrative area, and to prohibit their own people from crossing the border line separating the savage territory from the rest of the island. Taito Prefecture extended along the greater portion of the east coast, and contained about 51,000 savages, or one-half of the entire savage population. The tribes in the southern and southeastern parts of the prefecture belonged to the nonheadhunter groups, and thus were less dangerous than those farther north. It was planned to establish in this district 44 schools to afford proper facilities for the instruction of these savages, but only 7 were actually opened, 1 each at Pian, Baranyosha, Bakyseski, Kyaku, Suibi, Bashisho, and Karenko. These schools aimed to teach reading and writing. The *Proverbs for the Instruction of Savages* was adopted as a text-book for reading. After two years of instruction the majority of the pupils attending these schools were, according to report, able to understand and speak Formosan Chinese. Owing to an increasing lack of interest on the part of both teachers and pupils, and to a too frequent recourse to the infliction of corporal punishment, the attendance in these schools gradually dwindled, and by 1886 they existed in name only.

In 1876 the savage district in Koshun, the southernmost district in the island, was opened, and Chinese were induced by grants of funds

to settle therein for agricultural purposes. District schools were opened here, and for the first time in the history of the island Chinese and savage children were educated together. Schools were established as follows:

Location of school.	Attendance.	
	Chinese.	Savages.
Bun Ri Ho	2	8
Ko-to-zan	0	12
Sha Ma Ri	9	7
Rin ran	0	13
Korin	0	3
Shijukei	0	7
Total	11	50

For each savage child in attendance 500 cash * a month were allowed for food and stationery. The course of study was similar to that prescribed for the Taito schools, and the final results were also much the same. for by 1891 the attendance had dwindled to 13.

(d) SAVAGE EDUCATION UNDER GOVERNOR MING CHUAN.

In 1886, shortly after Formosa had become a separate province of the Chinese Empire, the enlightened governor, Liu Ming Chuan, established a department for the control of the training of savages and the cultivation of their territory. Of particular interest is the school which this department established among the Namakama tribe of the Tsou group in Nanto Prefecture. This school was located at the beginning of a road which had been opened in this prefecture, through the savage country to the east coast, this being the only road that was ever opened through the savage territory in central Formosa. This school was supposed to be the forerunner of others to be built along the road directly to the east coast, and it was hoped by running this line of schools through the heart of the savage territory that the tribes in that region would gradually be brought under Chinese influence. The idea was without doubt an excellent one and worthy the progressive attitude of the enlightened governor. But Chinese educational methods were not adapted to an alien and savage race, and when the Cantonese teacher in charge of the school attempted to instill into the minds of his pupils a respect for Chinese learning by free use of the rod, he soon found himself obliged to resign because of the nonattendance of his pupils.

In the Gilan district (northeast Formosa) a number of the Kiloh tribe of the Atayal group of head-hunters were, in 1889, induced by the Chinese authorities to take up their abode in the vicinity of Getsuibi Hill, where opportunities for education and training could be accorded them. Owing to the prevalence of disease among this tribe in their new location, they became superstitious and returned to their old home. A second worthy project thus ended in failure.

* 1 cash = 1 to 1.4 mills.

Governor Liu's most elaborate scheme for the education and civilization of the savages was contained in a proposition to found in Taihoku City a school for the instruction of the children of the head men of the various savage tribes. It was proposed to select the more intelligent children of the savage chieftains and educate them in the Chinese language and in the Chinese manners and customs; in a word, to mold them into Chinese. After having accomplished this, they were to be returned to their respective tribes, and in course of time succeed their fathers as head men, when their influence would extend throughout the tribes and result in civilizing, to some extent at least, their fellow tribesmen. This scheme also involved the training of a certain number of savages as Chinese interpreters to take the places of the incompetent Chinese occupying those positions. Undoubtedly the latter idea was a step in the right direction, for the Chinese who had acquired a sufficient knowledge of the savage dialects to act as interpreters were a notoriously corrupt class, and used their positions to extort from the savages as much as possible.

According to these proposals, a school was opened in Taihoku in March, 1888, with 20 pupils selected from among the sons of the head men of the various tribes of the Atayal group in North Formosa. A year later 10 more pupils were added to this number. The teaching staff in this school consisted of one head teacher, who received a salary of \$15 a month, and three assistants, each of whom received \$6 a month. Added to this staff there was one interpreter. The students ranged from 10 to 17 years of age. Their course of study was quite similar to that of the ordinary private school, and included the following subjects: Chinese reading and writing; conversational lessons in the native dialect, as well as in Mandarin, the former in order that they might not forget their own language; versification and composition, for the advanced pupils. The books used were the Three Character Classic, the Four Books, and the Five Ceremonial Books. The children were all obliged to dress in Chinese clothes, wear Chinese hats, shoes, and queues, and eat Chinese food. It is said that they did not take kindly to the wearing of the queue. The teachers were obliged to instruct them in Chinese manners and customs, and to escort them every three days on journeys about the city in order that they might become familiar with the habits and customs of the Chinese people. The pupils were allowed 4 cents a day for food and 5 cents a month for stationery. Prizes not exceeding in amount 15 cents a month were given for meritorious work. Living quarters were provided for the pupils and a cook and coolie attended them. In 1891 the first graduates were sent out from the school. During the same year Governor Liu resigned his post, and his successor, not in sympathy with his progressive measures, refused to support the school, and the pupils were obliged to return to their savage homes, where they discarded their Chinese dress, queues, and

manners, and proceeded promptly to forget all that had been taught them.

Although Governor Liu's experiment in winning the savage tribes to Chinese influence deserves naught but words of praise for the spirit in which it was undertaken and for the thorough manner in which it was carried out, especially when we contrast this work with the shabby attempts of his predecessors toward bringing a savage population under Chinese control, yet it must be conceded that he was making a dreadful mistake in presuming to saddle upon these savage children an education and training which was out of all harmony with their native surroundings and could scarcely have had any other effect than to alienate them from the members of their respective tribes. The entire educational system of the Chinese was based upon the imperial examinations for its objective point. Take away the objective point and the system has little or nothing to recommend it. This is doubly apparent when an attempt it made to fit the system to an alien people. Governor Liu is hardly to be blamed for this. During his time China had not yet come to recognize the futility of her antiquated methods of education.

5. SUMMARY OF EDUCATION UNDER THE CHINESE.

By way of summary, we may say for the Chinese educational administration in Formosa that, while it appears that those in authority generally recognized the fact that education might do much to inculcate in the minds and hearts of the people obedience and respect for learning, there was a universal mistaking of instruction for education. This fact was as true in China as in Formosa, hence it carried with it no distinguishing traits by which we may contrast education under the Chinese in Formosa with that under the Chinese in China. But there did exist in Formosa conditions which militated against progress in educational work of any sort. The discordant elements, the local disturbances, the constant presence of undesirable characters, and the political isolation from China proper, have all been touched upon as forces combining to make unfavorable conditions for a strong administration in educational matters and need no further comment here.

The only thing which seems to have kept the spark of educational effort burning in Formosa during the whole of the two centuries of Chinese rule was the Government imperial examinations, which nominally offered much, but in reality offered little or nothing, although they did result in impressing upon the minds of the masses a sense of the exalted position of the scholar, and undoubtedly kept private education at a higher standard than would have obtained otherwise.

The name of Governor Liu Ming Chuan might well be engraven upon tablets of stone in commemoration of his work in the cause of

education in Formosa, when we contrast his work with that done by his fellow-countrymen. His attempts at introducing into Formosa western schools and western education at a time when the Chinese Empire had manifested but a spasmodic sympathy toward institutions of western learning will always mark him as one of China's more enlightened leaders, especially when it is considered that his progressive measures were in reality opposed by those upon whom he had to depend for their execution. His efforts toward solving the savage problem by educating the sons of tribal head men in Chinese manners and customs and molding them into a Chinese people that they might return to their tribes and in turn civilize them, are deserving of commendation for their sincerity of purpose. Although he erred in misjudging the adaptability of the Chinese civilization of his day to an alien and savage race, yet the fact remains that he did more toward opening up the savage territory and bringing the savages into closer communication with the Chinese than any of his predecessors.

TABLE 1.—*Public schools established during the Chinese régime.*

Location.	Year established.	Pupils.	Teachers.	How supported.
1. Tainan.....	1686	20	2	Subscriptions and property belonging to school.
2. Tainan.....	1686	10	2	Do.
3. Anping.....	1686	15	2	House tax and school property.
4. Tainan.....	1705	24	2	Do.
5. Kagi.....	1707	10	2	Local revenues and properties belonging to school.
6. Ensuiko.....	1706	Unknown.	1	Do.
7. Tainan.....	1721	94	2	Contributions.
8. Tainan.....	1727	Unknown.	2	Government.
9. Shoka.....	1727	15	2	Do.
10. Shoka.....	1746	Unknown.	1	Properties of school.
11. Gilan.....	1753	17	1	Do.
12. Toroku.....	1754	Unknown.	1	Do.
13. Hozan.....	1755	Not fixed.	2	Do.
14. Kagi.....	1760	Unknown.	1	Do.
15. Pescadores.....	1767	Unknown.	2	Properties of school, contributions, and subsidy from district office.
16. Shinchiku.....	1782	Unknown.	2	Properties of school.
17. Kagi.....	1821-51	Unknown.	1	Do.
18. Shinchiku.....	1825	10	2	Unknown.
19. Banks.....	1843	Unknown.	1	Government.
20. Kagi.....	1868	Unknown.	1	Properties of school.
21. Banks.....	1880	4	1	Government.
22. Taihoku.....	1881	20	2	Do.
23. Taihoku.....	1881	Unknown.	2	Properties of school.
24. Horiaba.....	1884	Unknown.	Unknown.	Do.
25. Shinahin.....	1883	Unknown.	2	Government.
26. Tainan.....	1887	80	2	Do.
27. Taihoku.....	1887	.....	2 foreigners and several Chinese.	Government.
28. Bioritsu.....	1888	Unknown.	1	Unknown.
29. Taichu.....	1890	Unknown.	Unknown.	Partly by Government.
30. Taichu.....	1890	20	2	Unknown.
31. Taitotei.....	1891	Unknown.	1 (a Dane).	Government.
32. Taihoku.....	1894	Unknown.	Unknown.	Unknown.
33. Kelung.....	1894	Unknown.	Unknown.	From certain tax funds.

α School not completed.

NOTE.—Nos. 1, 2, 5, 9, 18, and 21 are district schools. No. 27 is the school for western learning. No. 31 is a school designed for training telegraph operators.

TABLE 2.—*Private and quasi-public schools established during the Chinese régime.*

District.	Private schools.	Quasi-public schools.	Total.
Anping (Tainan).....			22
Hosan.....	226	6	232
Kagi.....	8	1	9
Peacadores.....	2	2	4
Taiwan (Taichu).....	3	1	4
Shoka.....	12	8	20
Toroku.....	8	2	10
Bloritsu.....		4	4
Horiasha.....		26	26
Tamsui.....	1		5
Shinchiku.....		8	8
Kelung.....	1		1
Total.....			346

* For savages.

* Estimated, 1876.

TABLE 3.—*Schools for savages established by the Chinese.*

Date of establishment.	Location.	Tribes or group.	Teachers.	Subjects taught.	Text-books used.
1682.....		Mekawam.....	1	Reading and writing.	Chinese classics.
1696.....	South Formosa (Tainan and Hosan).	Same as came under influence of Dutch.	1	do.....	Do.
1785.....	Shora, Kagi, Ensulko, Koroku, Shinchichu.	do.....	50	do.....	The Four Books and simple poems.
1875.....	Traito Prefecture, along east coast.	Amis, Pailwan.....	7	do.....	Proverbs for instruction of savages.
1876.....	Koshun.....	Payuma.....	16	do.....	Do.
1887.....	Nanto.....	Kamakama.....	1	do.....	Classics.
1888.....	Gilan.....	Keloh (Atayal).....	1	do.....	
1888.....	Taihou city.....	Atayal tribes.....	4	Versification, composition, and conversation.	Do.

NOTES.—The school established in 1862 was a private institution, all others being Government schools.

As a rule there was but one teacher to a school.

The student enrollments in the above schools are for the most part unknown; however, in the case of the Koshun schools there were 61 pupils enrolled; in the Nanto school, 13 enrolled; in the Taihou city school, 30 enrolled.

III.—EDUCATION UNDER THE JAPANESE.

1. STATUS OF EDUCATION IN JAPAN.

When Japan in 1895 took possession of the island of Formosa 65.4 per cent of her children of school age were under instruction. Her national school system, established in 1870, had by the year 1895 succeeded in enrolling so great a proportion of her children. The Emperor's decree of 1871, "It is intended that henceforth education shall be so diffused that there may not be a village with an ignorant family nor a family with an ignorant member," is in Japan well on the way to realization, for returns for the year 1906 show 97 per cent of the

boys and 91 per cent of the girls of school age under instruction. We are now to note the extent to which this decree is to be interpreted as embracing her first colonial possession.

2. CONDITIONS IN FORMOSA.

In June, 1895, when Japan took formal possession of Formosa, she found conditions in the island distinctly unfavorable to an immediate peaceful occupation. At that time the native (Chinese) population numbered about 2,600,000. There were also 100,000 aborigines, who occupied the mountainous eastern half of the island. As mentioned in the previous section, the Chinese had never succeeded during the two centuries of their occupation in effectively pacifying the island. When the Japanese made an effort to take possession they were met on all sides by armed opposition, and were obliged to carry on actual warfare against a rebel population.

3. ESTABLISHMENT OF AN EDUCATIONAL SYSTEM.

Within six weeks from the date of the formal cession of Formosa to Japan, and three months before the occupation of the island had been completed, the department of education for Formosa was established at Shirin, a small town in the vicinity of the capital city and an old center of learning under the Chinese régime. A few days later a language school for the training of teachers was opened under the instruction of the educational staff, and 20 native Chinese were enrolled as students. After three months' study, the progress made by these students had been so rapid as to warrant their being sent out as teachers in the elementary schools. In January, 1896, Shirin was attacked by rebels, six Japanese on the educational staff were killed, and the records and books of the department of education destroyed. Temporary headquarters for the department were established in Tokyo, and in March of the same year moved back to Shirin. The language school was again opened. Naturally the greatest difficulty with which the educational authorities had at first to contend was the lack of sufficient educated Japanese speaking Chinese and Chinese speaking Japanese to carry on the work of teaching a people who spoke but Chinese. On the 13th of April, 1896, Mr. Izawa, director of education for Formosa, brought from Japan 45 teachers of elementary schools and placed them in the Shirin training school, from which, after a special course of three months, they were sent out as teachers in the native schools. Simultaneously with the training of these Japanese teachers in Shirin, a number of educated natives had been sent to Tokyo for the study of Japanese.

In April, 1896, when the civil administration superseded the military rule, the department of education was transferred to the

offices of the civil administration in Taihoku City. Until July, 1898, the entire educational work in the island was under the direct control and supervision of the Formosan government, and all expenditures were met from the government funds. From that time forth it was decided that the expenses of the public schools should be borne by local taxes, and that such schools should only be established in those districts in which provision was first made for their support. This rule applied only to the public schools; that is, the elementary schools for the natives (Chinese). As we shall see later, special provision is made for elementary schools for the Japanese and for secondary schools. Before July, 1898, schools had been established in 15 districts, as follows: Kelung, Tamsui, Taihoku, Shinchiku, Bioritsu, Taichu, Horisha, Rokko, Unrin, Kagi, Tainan, Hozan, Koshum, Taito, and the Pescadores. In these schools there were enrolled 1,606 pupils under 72 teachers; 65 of the latter were Japanese. The Japanese language had been made the principal subject of study, for the idea of assimilating the native population was the predominant idea in educational work up to that time.

It might thus be said that the preliminary work in establishing a school system required three years. The system as established in July, 1898, is, with but a few subsequent alterations, the same as that now in vogue. The position which the administration of educational affairs occupies in the civil administration is set forth in the following plan:

The governor-general nominally occupies a position in educational administration analogous to that of the minister of education in Japan. In reality, however, he delegates the greater portion of his functions in this field to the educational section of the bureau of general affairs of the civil administration. The educational section has, however, no jurisdiction, delegated or otherwise, over the medical school, the industrial sugar school, or the agricultural schools, special provision being made for these institutions. The educational system provides three distinct classes of public schools—one for the education of the natives (Chinese), one for the Japanese, and one for the aborigines. That for the education of the natives includes local elementary schools and government secondary and special schools; that for the education of the Japanese includes government elementary, secondary, and special schools; that for the education of the aborigines local elementary schools only. Besides the schools provided for by this system, there exist also a number of private schools. The maintenance of all government schools is provided for in each annual budget of the civil administration of the island, while that of all local schools is defrayed by the local districts.

4. CENSUS RETURNS HAVING TO DO WITH EDUCATION.

According to the census returns for the year 1905 the population in the island was as follows:

Nationality.	Males.	Females.	Total.
Natives (Chinese).....	1,558,420	1,357,564	2,915,984
Japanese.....	32,064	21,804	53,868
Aborigines.....	57,323	55,872	113,195
Total.....	1,647,807	1,434,740	3,082,547

The returns for the children of school age were as follows:

Nationality.	Boys.	Girls.	Total.
Natives.....	321,871	266,915	588,786
Japanese.....	2,079	1,749	3,828
Aborigines.....			17,000
Total.....			609,614

^a Approximately.

The number of children of school age under elementary instruction during the year 1906 was as follows:

Nationality.	Public schools.			Private schools.			Public and private (both sexes.)
	Boys.	Girls.	Total.	Boys.	Girls.	Total.	
Natives (Chinese).....	27,862	3,961	31,823	19,584	331	19,915	51,738
Japanese.....	1,684	1,601	3,285	281		281	3,566
Aborigines.....	996	92	1,088				1,088
Total.....	30,536	5,654	36,190	19,865	331	20,196	56,382

Thus 5.5 per cent of the native (Chinese) children of school age were during the year 1905 enrolled in public elementary schools, and 3.4 per cent in private schools, or about 9 per cent under instruction. Of the Japanese children of school age, 86 per cent were in Government elementary schools and 7 per cent in private schools, or 93 per cent under instruction. Of the children of the aborigines, about 6 per cent were under instruction during that year.

5. SCHOOLS FOR NATIVES.

The term "native" is applied to the Chinese population. As the natives represent about 95 per cent of the island's total population, the question of their education is of prime importance. The system of native public schools comprises local schools for elementary education, and Government schools for advanced instruction. In addition to these there are a number of private schools.

(a) ELEMENTARY PUBLIC SCHOOLS.

Administration, establishment, and maintenance.—For administrative purposes the island of Formosa is divided into twenty prefectures. The public schools are under the control of the local prefects, subject to instructions from the governor-general. Each prefect appoints a superintendent of education for his respective prefecture. As no administrative positions under the Formosa government can be held by natives, both the prefect and the superintendent of education must be Japanese. For each school in his prefecture the prefect appoints an educational committee, consisting of not less than three nor more than nine members, chosen from among the influential natives resident in the district in which the school is located. It is the duty of this committee to assist the prefect and the superintendent of education in matters pertaining to the school, and, when called upon to do so, to give its opinion upon matters relating to the attendance and selection of pupils, equipment of the school, and estimates for the school budget. This committee also collects school moneys and assists in financing the school.

The establishment, consolidation, and abolition of public schools are made by application from the natives resident in the district concerned, through the prefect to the governor-general. In the application for the establishment of a public school, the amount subscribed by the property holders must be stated. This amount must be equivalent to nine-tenths of the cost of establishing the proposed school before the petition may be granted. The prefect reports to the governor-general the circumstances and conditions surrounding the support of a school in the district concerned, and recommends certain action. The governor-general is at liberty to reject or accept the application. Generally speaking, no school is established unless an enrollment of at least 60 pupils can be guaranteed.

The expenses for the maintenance of public schools are met from the revenues accruing from certain lands belonging to the schools,* from contributions, tuition fees, and special tax levies. Tax levies are assessed against the property owners of the district in which any school is located at a rate fixed by the governor-general. This rate varies in different districts. In the case of the Banka public school the Government pays the teachers' salaries and traveling expenses, while in all other cases these items are met from the local revenues. Tuition fees are assessed at a rate not less than 25 cents or more than \$1 a year a pupil, the amount in each district being determined by the local prefect. Nonresidents may be assessed an extra fee. The items of expenditure for education for the year 1906 are given on page 62.

* During the Chinese régime, the expenses for the maintenance of public schools were met in a great measure from the revenues of farm lands belonging to the schools. These lands have remained public property, and thus are in many cases available for educational purposes at present.



THE SHIRIN PUBLIC SCHOOL

This is without doubt the best country public school in the Island. It is located in the center of a fertile plain which is in rice. This school has an enrollment of about 200 boys and 75 girls.

Buildings and equipments.—Instead of the damp, dingy structure crowded into a densely populated Chinese village, which during the Chinese régime served the purpose of a school, we find the public school of to-day a well-constructed red brick building, properly ventilated and lighted, and located on an open piece of ground surrounded by playgrounds and athletic fields. Wherever possible the schoolhouse is located without the limits of the village and surrounded by open fields. The schoolhouses which are gradually springing up in the native villages throughout the island are modern up-to-date structures. Nor are they small, for the ordinary country school is planned to accommodate from 200 to 300 pupils, and contains from five to eight class rooms. Formosa is well populated, as the civilized half of the island contains 400 people to the square mile, hence schoolhouses must be built to accommodate large numbers of pupils. One of the particularly commendable features in regard to the establishment of a public school is the fact that ample facilities for playgrounds, athletic fields, and gardens are provided. Many of the country schools are equipped with tennis courts and out-door gymnastic apparatus. The most recently constructed public school is that located at Banka, a suburb of the capital city. In planning the construction of this school, the authorities have had the benefit of twelve years experience in public school construction, hence we find represented here the latest ideas in that direction. Like all other schools in the island, this institution is a group of one-story buildings, which cost \$30,000, and is arranged to accommodate 800 pupils.

Public school buildings are often utilized for social purposes, for public meetings, and as barracks for Government troops. The policy of the Government is gradually to extend the building of public schools as fast as the people are able to pay for them. At present, the Government grants a subsidy equal to one-tenth of the cost of construction. A public schoolhouse is distinctly an ornament to the village to which it belongs; in fact, one wonders how it is possible to raise sufficient money for its construction from among a people who, to judge by appearances, seem to have little or nothing. The character of the public school building erected in any district is determined by the amount of the subscriptions from the residents of the district. In the country districts the cost of the buildings ranges from \$500 to \$6,000. There are at present in the island 180 public schools and 29 branch schools for the elementary education of natives.

Teachers.—In the Government regulations it is stated that the public schools aim to give moral culture and practical knowledge to the native pupils in such a manner that their character may be molded into that of the nation and that they may acquire the national language (Japanese). The administration has in view the gradual supplanting of Chinese by Japanese as the language of the island, and

the aim of the educational authorities is gradually to mold the native child into a loyal Japanese subject. As 95 per cent of the island's population is Chinese, it is quite apparent that the administration has taken upon itself no small task.

In this connection the question of securing teachers for the public schools becomes one of prime importance. The old Chinese idea that any person who had been under instruction for a certain number of years could in turn instruct others does not obtain with the Japanese. In Formosa, as in Japan, those appointed to the position of teacher must have had a special training in schools provided for that purpose. There are, however, in Formosa a number of hired assistants, formerly teachers in private schools who have not graduated from a normal course, but these are being gradually displaced by graduates from the normal department of the Language School. Statistics for the year 1906 show that there were 392 Japanese and 470 native teachers in the public schools. The head teachers are Japanese, and while Japanese occupy also many of the subordinate positions, the educational authorities are making an effort to fill as many as possible of these latter positions with native teachers. The statistics for the year 1901 show 246 Japanese and 255 native teachers; these figures contrasted with those for the year 1906 show a substantial increase in the proportion of native teachers.

When teachers are desired for a new school the prefect applies to the educational section, which secures from the Language School a list of possible candidates with their recommendations. This list is forwarded to the prefect, who recommends to the governor-general a certain person for appointment as head teacher. The head teacher in turn recommends the appointment of certain assistants.

The native teacher can be secured at less than one-third the cost of the Japanese teacher, for the latter receives, upon an average, a salary of \$300 a year in addition to living quarters, while the former receives about \$8 a month and provides his own living quarters. The pay of the Japanese teacher in Formosa is very much higher than that received by his colleague in Japan. The women teachers, of whom there were in 1906 48 Japanese and 38 native, are paid from \$10 to \$20 a month for the Japanese and from \$3 to \$10 a month for the natives. The salary paid to the native male teacher is at present too low to induce the better class of young men to remain with the work for many years. Many of these after completing their three years' agreement take positions in other fields at higher pay.

The Japanese and native teachers appear to work well together. Naturally the Japanese teacher is handicapped by reason of his superficial knowledge of the native dialect and native customs, while on the other hand the native teacher finds it difficult to adapt himself to modern class-room methods. But these difficulties succumb to

experience, so that it is only a matter of time until they will have entirely disappeared. The efficiency of the native teacher, though not equal to that of the Japanese, is gradually improving. Many facilities are afforded teachers for advanced study. Summer schools for advanced training are opened each year in Taihoku City, and arrangements are made whereby the Government defrays the traveling expenses of teachers in attendance at these sessions in such a manner as to permit each teacher to attend once every three years. Besides summer schools, teachers' conferences are held once each month in each prefecture, the local prefect presiding.

The number of hours a day devoted to teaching averages five and the number of pupils to the class averages sixty. But the teacher's labors are not necessarily finished with his class-room work. He is often obliged to go among the parents of the children and exert his efforts toward keeping the pupils in regular attendance at school. This, as will be noted later, is no small task. If a principal is asked what he finds to be his greatest difficulty in educating the native, he will invariably reply that it is the indifference of the parents.

Course of study and text-books.—The regular prescribed course of study embraces six years. This course, which is fairly uniform throughout the island, includes the following branches: Morals, national language, arithmetic, Chinese composition, music, and gymnastics. Sewing is added for the girls, and agriculture, commerce, or manual training may be added for the boys. Table 4 shows the number of hours given to each branch and subject. By examining this tabulation the prominent position assigned to the study of Japanese becomes apparent. As already stated, it is the desire of the authorities to make Japanese the language of the island. The study of Chinese is carried no further than is necessary, for the allotment of four or five hours a week to this subject is only in response to a demand on the part of the parents that Chinese be studied in the schools to which they send their children. Another branch which appears throughout the programme is that termed "morals." In all of the elementary schools of Japan morals is a prescribed branch of study.* The educational authorities in Formosa contend that the

* Instruction in morals in the schools of Japan is based on the Imperial Rescript on Education issued in 1890. The following English version was made by a number of scholars convoked especially for the purpose by the Japanese educational department:

THE DEPARTMENT OF EDUCATION, JAPAN,
June, 40th year of Meiji (1907).

Know ye, Our subjects:

Our Imperial Ancestors have founded Our Empire on a basis broad and everlasting and have deeply and firmly implanted virtue; Our subjects ever united in loyalty and filial piety have from generation to generation illustrated the beauty thereof. This is the glory of the fundamental character of Our Empire, and herein also lies the source of Our education. Ye, Our subjects, be filial to your parents, affectionate to your brothers and sisters; as husbands and wives be harmonious, as friends true; bear yourselves in modesty and moderation; extend your benevolence to all; pursue learning and cultivate arts, and thereby develop intellectual faculties and perfect moral powers; furthermore, advance public good and promote common interests; always respect the Constitution and observe the laws; should emergency arise, offer yourselves courageously to the State; and thus guard and maintain the prosperity of Our Imperial Throne coeval with heaven and earth.

Chinese pupil is particularly in need of instruction in morals, and that the teachers find it very difficult to teach it effectively. The surroundings of the native child in the island have, without doubt, been most unfavorable, and it is not strange that the standard of morals is said to be low among them.

TABLE 4.—*Study schedule for public elementary schools for the native Chinese.*

Branch of study.	First year.		Second year.	
	Hours per week.	Subject or topic.	Hours per week.	Subject or topic.
Morals.....	2	Principles of morality.....	2	Same as first year.
Japanese.....	9	Story telling, reading, composition, writing.	12	Do.
Arithmetic.....	4	Simple operations to 20.....	4	Same, but up to 100.
Chinese.....	5	Simple words, phrases, and sentences.	5	Same as first year.
Gymnastics.....	2	Physical culture and play..	2	Do.
Music.....	1	Singing.....	1	Do.
Sewing.....	0			
Total.....	23		26	

Branch of study.	Third year.		Fourth year.	
	Hours per week.	Subject or topic.	Hours per week.	Subject or topic.
Morals.....	2	Same as first year.....	2	Same as first year.
Japanese.....	13	do.....	13	Do.
Arithmetic.....	5	Through division.....	5	Decimals and fractions.
Chinese.....	5	Reading and composition..	5	Same as third year.
Gymnastics.....	2	Physical culture.....	2	Do.
Music.....	1	Same as first year.....	1	Same as first year.
Sewing.....	3	Use of needle.....	3	Simple sewing.
Total.....	31		30	

Branch of study.	Fifth year.		Sixth year.	
	Hours per week.	Subject or topic.	Hours per week.	Subject or topic.
Morals.....	2	Principles of morality.....	2	Same as fifth year.
Japanese.....	14	Reading, writing, composition.	14	Do.
Arithmetic.....	5	Decimals and fractions.....	5	Do.
Chinese.....	4	Reading and composition..	4	Do.
Gymnastics.....	2	Physical culture.....	2	Do.
Music.....	1	Singing.....	1	Do.
Sewing.....	4	Making and repairing clothes.	4	Do.
Manual training ^f		Simple processes.....		Do.
Agriculture ^f		Elementary work.....		Do.
Commerce ^f		Elements.....		Do.
Total.....	28		28	

So shall ye not only be Our good and faithful subjects, but render illustrious the best traditions of your forefathers.

The Way here set forth is indeed the teaching bequeathed by Our Imperial Ancestors, to be observed alike by Their Descendants and the subjects, infallible for all ages and true in all places. It is Our wish to lay it to heart in all reverence, in common with you, Our subjects, that we may all thus attain to the same virtue.

The 30th day of the 10th month of the 23rd year of Meiji.

(Imperial Sign Manual. Imperial Seal.)

^a Music increased at teacher's discretion.

^b In the third and fourth years girls are given but two hours a week in Chinese.

^c In the fifth year girls are given but two hours a week in Chinese.

^d Music increased at discretion of teacher.

^e Sewing is given to girls only, and the time devoted to it is deducted from the study of language.

^f Manual training, agriculture, and commerce given at discretion of teachers in charge of schools.

The Chinese parent finds it difficult to understand the usefulness of music and physical culture in the school curriculum, and if he had his way he would have more Chinese and less music and gymnastics. But one has only to visit a class of native pupils engaged in their singing exercises to appreciate the usefulness of the subject as a part of the daily programme. The Chinese child is fond of singing and has a better ear for music than the Japanese lad. He enters into his singing with a spirit of enjoyment far in excess of that which he exhibits in any of his other work, and for this reason much good language instruction may be imparted through this medium. Language is also taught by means of object lessons. Upon one of the writer's visits to a public school he found a teacher of second-year pupils holding before his class a live fish and drilling them in words and phrases descriptive of the object. Pictorial charts are likewise used in language instruction. These methods are a pleasing contrast to the old Chinese idea of forcing attention by a liberal use of the rod.

As for physical culture and gymnastics, three hours a week are given to the former, and school yards are provided with tennis courts, playgrounds, and gymnastic apparatus for the use of the pupils. The old Chinese system did not recognize the necessity for physical culture, as the ideal of the Chinese scholar was opposed to physical exertion of any kind. When the Japanese educational authorities placed physical culture in the public school curriculum they were criticised by the Chinese parent, who contended that it was done with the intention of training his children as soldiers for the Japanese army. Hence it was necessary to avoid giving any work in physical culture which bore the semblance of military drill. One of the admirable features of the exercises in physical culture is that they are given out of doors, at least so far as the weather will permit. The native child likes the work and is certainly benefited by it. Every one familiar with the Chinese knows his tendency to consumption and lung troubles. The teachers in the public schools attest the fact that the pupils are profiting much from the work in physical culture, for their general health is improved and they have become more active in their class-room work as a result.

Upon one of the writer's visits to a public school he found a class of sixth-grade pupils busily engaged in unraveling the apparently tangled skeins of world trade routes as depicted upon a commercial map. The Japanese instructor was making an effort to impress upon the minds of the pupils the position occupied by Formosa in the markets of trade.

To a westerner one of the peculiarities of the methods used in the East in the study of arithmetic is the place assigned to the abacus, or counting board. All pupils in arithmetic learn to count upon this instrument, and those familiar with the Chinese or Japanese account-

ant can bear witness to the remarkable speed and accuracy of his methods involving the use of the abacus, which to a foreigner is an incumbrance. A number of public schools include in their courses of study elementary agriculture and commerce and a certain amount of manual training. During the year 1906, 26 schools with 493 pupils included agriculture in their curricula; 3 schools with 333 pupils included courses in manual training; 2 schools with 35 pupils included the elements of commerce. But the work in these courses is still in an experimental state, and the department of education will be obliged to improve and extend it before it will amount to anything.

As for text-books, among the boards under special organization one has to do with the compilation of text-books. The public schools have been furnished with the products of the work of this board, which are sold to the pupils at a price which simply covers the cost of printing. The series of readers includes illustrated primers and more advanced books containing much the same kind of material as that found in Western readers, with the exception that the reading matter has to do with things Chinese and Japanese as well as things Western. For the study of Chinese, in the place of the abstruse Chinese classic, the illustrated primers and readers which have been introduced deal with various phases of Chinese life, and must be infinitely more interesting to the Chinese child. However, as the Chinese classic is being rapidly ousted from the elementary schools of China, it is scarcely fair any longer to contrast the Japanese introduction of simple readers with the Chinese use of the ancient Three Character Classic. The Japanese readers provided by the board include ten books arranged upon a progressive basis. The Chinese readers number six. The Sixth Reader, which is used for the fourth and fifth year pupils, contains forty lessons, the majority of which contain information dealing with Formosa and Japan. An interesting feature connected with the lessons in the Japanese primer is that many of them deal with matters pertaining to personal cleanliness and to the importance of bathing. In passing, it might be said that the Japanese authorities are doing much to encourage cleanliness on the part of a people who are, in this respect, the direct antithesis of themselves. Foreign residents who have lived in Formosa for some years notice, on the part of the natives, considerable improvement in cleanliness, which improvement is due to the labors of the Japanese.

Pupils.—Pupils to be admitted to the public schools must be at least 7 and not more than 20 years of age. Of the 31,823 Chinese children enrolled in the elementary public schools during the year 1906, 10,318 were between the ages of 7 and 10, 11,929 between the ages of 10 and 13, 7,102 between the ages of 13 and 16, and 2,474 upwards of 16. According to grades, 14,484 were enrolled in the first

grade, 7,643 in the second, 4,528 in the third, 2,751 in the fourth, 1,577 in the fifth, and 815 in the sixth. The average daily attendance of the pupils for 1906 was 66 per cent of the enrollment, an increase of 1 per cent over the figures for the previous year. Contrasted with this, it is of interest to note that the average daily attendance of the Japanese in elementary schools for the same year was 90 per cent of the enrollment. This is hardly a fair comparison, for school attendance with the Japanese children is compulsory, and, moreover, there are not among the Japanese population the same reasons for keeping the children out of school as obtain among the natives. The bulk of the native population is engaged in farming, thus during certain seasons the parents find it to their interest to take the children out of school for work in the fields. The Japanese population is centered in the cities, and, with the exception of a small colony on the east coast engaged in the growing of peppermint, none of the Japanese are farmers. But aside from these facts there is a tendency on the part of the Chinese parent to take his child out of school for trivial causes. Chinese festivals and feast days are numerous, and, moreover, the Chinese boy who really desires to find an excuse for absence from school has a long list of relatives among whom marriage and funeral ceremonies, not to mention cases of illness, are bound to occur.

As already mentioned, the teacher, or more especially the principal of the school, finds the most difficult part of his labor that of persuading the parents to send their children to school regularly. Various measures are adopted to encourage regular attendance. Individual prizes are awarded and class banners are given, but where the Japanese would be content to work merely for a class banner the money-loving Chinese prefer a reward which may be transferred into cash for personal use.

Native pupils are selected from among the middle and wealthier classes, for only the children of those who are in a position to contribute toward the support of a school are admitted. In addition to the tax levied upon the property of the parents, each child in attendance at the public schools must pay a tuition fee which averages about 35 cents a year.

While the Chinese parents are gradually beginning to send their daughters to the public schools, they are far behind the Japanese parents in this regard. During the year 1906 the enrollment of Chinese girls in the public schools was equal to but one-seventh of that of boys, while among the Japanese the number of boys and girls in the elementary schools was about equal. In the lower classes and in the smaller country schools boys and girls are taught in the same classes, while in the larger schools they are separated after the first year. One of the commendable features of the work prescribed for girls is the sewing class.

Intellectually, the native boy seems to be the equal of the Japanese. While he does not take as readily to instruction in mathematics as the Japanese and is criticised by the teacher for his lack of reasoning power, yet his linguistic abilities are undoubtedly superior to those of the Japanese lad. He is possessed of a wonderfully retentive memory and learns Japanese so readily that after his fourth or fifth year it is possible to give all of this instruction in Japanese. In music the native boy appears to be specially gifted, if one is to judge from the enthusiasm with which he enters upon his singing exercises. Upon one of the writer's visits to public schools, individual members of the second grade were called upon to sing Japanese verse before the class. The teacher's requests were met with enthusiastic responses, and the children upon whom he happened to call rose without the least hesitancy and, with or without an accompaniment, sang the exercise.

The native pupil is criticised for his lack of appreciation of moral instruction; in fact, it is said that he appears to be scarcely affected by the teacher's exhortations to a better sense of morals.

One of the most hopeful features in the education of the Chinese native lies in the interest which he manifests in athletic games. The public school yard, during the fifteen minutes' recess at the end of each hour, presents as animated a scene as does that of any western school. The Chinese child loves play and takes a keen delight in all games. Already interclass and interschool athletic meets have been held, and not only do the pupils delight in them, but the parents exhibit a surprising amount of pleasure at seeing their children participate in these sports.

As for adopting Japanese customs, the native pupil exhibits no perceptible signs in that direction. He still wears the queue and dresses in true Chinese style, for home influence is bound strongly to assert itself, especially among a people whose family ties are so strongly interwoven as are those of the Chinese. The home influences and surroundings of the native child are distinctly Chinese, and as the native pupil does not associate with the Japanese boys, who have special schools provided for them, it will undoubtedly be years before he shows any signs of adopting customs other than those of his own race.

The number of pupils who have been graduated from the elementary Chinese public schools during the past seven years includes 1,803 boys and 50 girls. In other words, about 3 per cent of the children who enter the public schools graduate therefrom. This low proportion is accounted for in part by the fact that graduation does not entitle students to admission to secondary schools, for, in order to enter these institutions, they must submit to examination, and a fifth-year pupil is eligible to this.

(b) SECONDARY SCHOOLS.

For the secondary education of the native Chinese there are provided the following schools: (1) The Language School, including a normal department and a special school for girls; (2) the Medical School; (3) the Agricultural School; (4) the Industrial Sugar School. During the year 1906 there were graduated from the public elementary schools 502 boys, an increase of 130 over the previous year. During the same year 350 boys applied for admission to the Language School, of which number it was only possible to accept 90; 60 of these were assigned to the normal and 30 to the academic department. To the Medical School over 300 applied for admission, and only 35 could be accepted. The Agricultural Experimental Station accepts 80 new students each year, while the Industrial Sugar School takes about 12. Thus the secondary schools for native Chinese boys accommodate about 200 new students each year.

The Language School.—The Language School is under the direct control of the civil administration and is supported by Government funds. It contains a normal and an academic department. Students are admitted to either department upon an examination covering the first five years' work of the public elementary school. Applicants must be at least 14 and not over 23 years of age. The number of students admitted to the normal department is limited to from 60 to 80 a year, which at present is about one-third of the number that apply. This department aims to equip Chinese natives for work as public school teachers. The students live in dormitories and their expenses are met by the Government. In return for this, they are bound to give their services to the educational department for a period of three years following their graduation. The prescribed course of study embraces four years, and includes morals, pedagogy, Japanese, Chinese, history, geography, natural science, music, manual training, commerce, and physical culture. The following table (Table 5) shows the number of hours given to each subject:

TABLE 5.—*Study schedule for the normal department (for Chinese) of the Language School.*

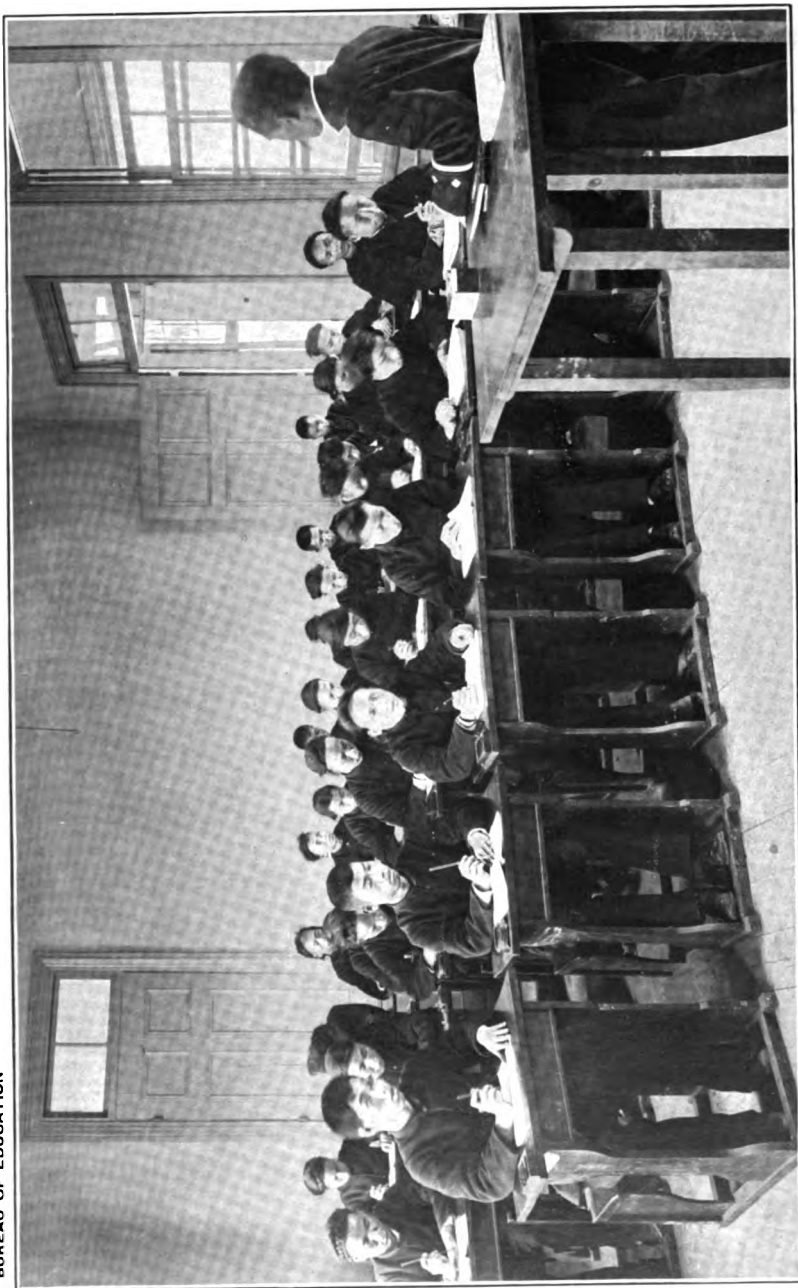
Subject.	First year.		Second year.	
	Division of the subject.	Hours a week.	Division of the subject.	Hours a week.
Morals	Morality and etiquette	1	Same as first year	1
Japanese .....	.....	9	.....	9
Chinese	Reading and composition	3	Same as first year	3
History and geography	Geography of Japan	2	History of Japan	2
Arithmetic .....	.....	3	Algebra added	3
Natural science .....	.....	4	.....	4
Writing and drawing .....	.....	2	.....	2
Music	Vocal	2	Same as first year	2
Gymnastics and sports .....	.....	4	.....	4
Total .....	.....	30	.....	30

TABLE 5.—*Study schedule for the normal department (for Chinese) of the Language School—Continued.*

Subject.	Third year.		Fourth year.	
	Division of the subject.	Hours a week.	Division of the subject.	Hours a week.
Morals	Same as first year	1	Same as first year	1
Education	Pedagogy and elementary metaphysics.	2	School management and methods of teaching.	6
Japanese .....	.....	6	.....	6
Chinese .....	.....	2	.....	2
History	Japan	2	.....	.....
Mathematics	Algebra and geometry	3	Geometry	1
Natural science .....	.....	4	.....	2
Writing and drawing .....	.....	1	Blackboard drawing	1
Music	Use of musical instruments.	2	Same as third year	2
Manual training .....	.....	2	.....	4
Agriculture	Practice	2	.....	.....
Commerce	Elements	2	Same as third year	2
Gymnastics	Sports and military gymnastics.	3	do	2
Total .....	.....	32	.....	29

The Banka Public School is utilized as a special practice school for upper-class men, who in the presence of normal school instructors carry on work as teachers. Upon graduation, the Chinese students are eligible to appointment as assistant teachers only. During the year 1906 there were graduated from the normal department 44 Chinese natives, making a total of 152 since the establishment of the school ten years ago.

The academic department of the Language School aims to prepare a certain number of young men to fill positions as Government clerks and interpreters, besides affording to others an opportunity for advanced schooling. It accepts students upon examination only, and a limited number are admitted each year. Applicants for admission are presumed to have completed at least five years in the public elementary school, and to be not less than fourteen nor more than twenty-three years of age. The school is located in the same compound with the normal department in Taihoku City. Dormitories are provided for the students, a certain number of whom are supported at Government expense, pledging in return their services for three years following their graduation. The course of study embraces four years and includes morals, Japanese, Chinese composition, history, geography, arithmetic, natural sciences, writing, drawing, music, manual training, commerce, elementary law, and gymnastics. The following table shows the number of hours given to each subject:



CLASS ROOM IN THE LANGUAGE SCHOOL.

These natives are being trained as teachers for public schools.

TABLE 6.—*Study schedule for the academic department of the Language School.*

Subject.	First year.		Second year.	
	Division of the subject.	Hours a week.	Division of the subject.	Hours a week.
Morals		1		1
Japanese		9		9
Chinese		3		3
Geography and history ..	Reading and composition ..	2	Same as first year ..	2
Mathematics	Japanese geography ..	2	Japanese history added ..	3
Natural science	Arithmetic ..	3	Algebra ..	4
Drawing	Zoology and botany ..	2	Same as first year ..	2
Music	Vocal ..	2	Same as first year ..	2
Gymnastics (military) ..		4		4
Total		30		30

Subject.	Third year.		Fourth year.	
	Division of the subject.	Hours a week.	Division of the subject.	Hours a week.
Morals		1		1
Japanese		6		6
Chinese	Same as first year ..	2	Same as first year ..	2
History and geography ..	History of Japan ..	2	Same as third year ..	2
Mathematics	Geometry ..	3	do ..	3
Gymnastics (military) ..		4		3
Manual training		2	Theory ..	2
Agriculture	Theory and practice ..	2	Same as third year ..	4
Law and political econ- omy ..			Legal forms and bookkeep- ing ..	4
Drawing		2	Instrumental ..	1
Music	Same as first year ..	2	Same as first year ..	1
Natural science		4		2
Total		30		31

Tennis courts, athletic fields, and gymnastic apparatus are provided. Owing to the interest taken by the native students in athletics, their physical condition is being much improved. Athletic and bicycle meets between the different schools are held each year and prove to be of great benefit.

There were enrolled 76 students during the year 1906. The number of graduates from this department for the same year was 6. Since the establishment of the school 113 students have been graduated.

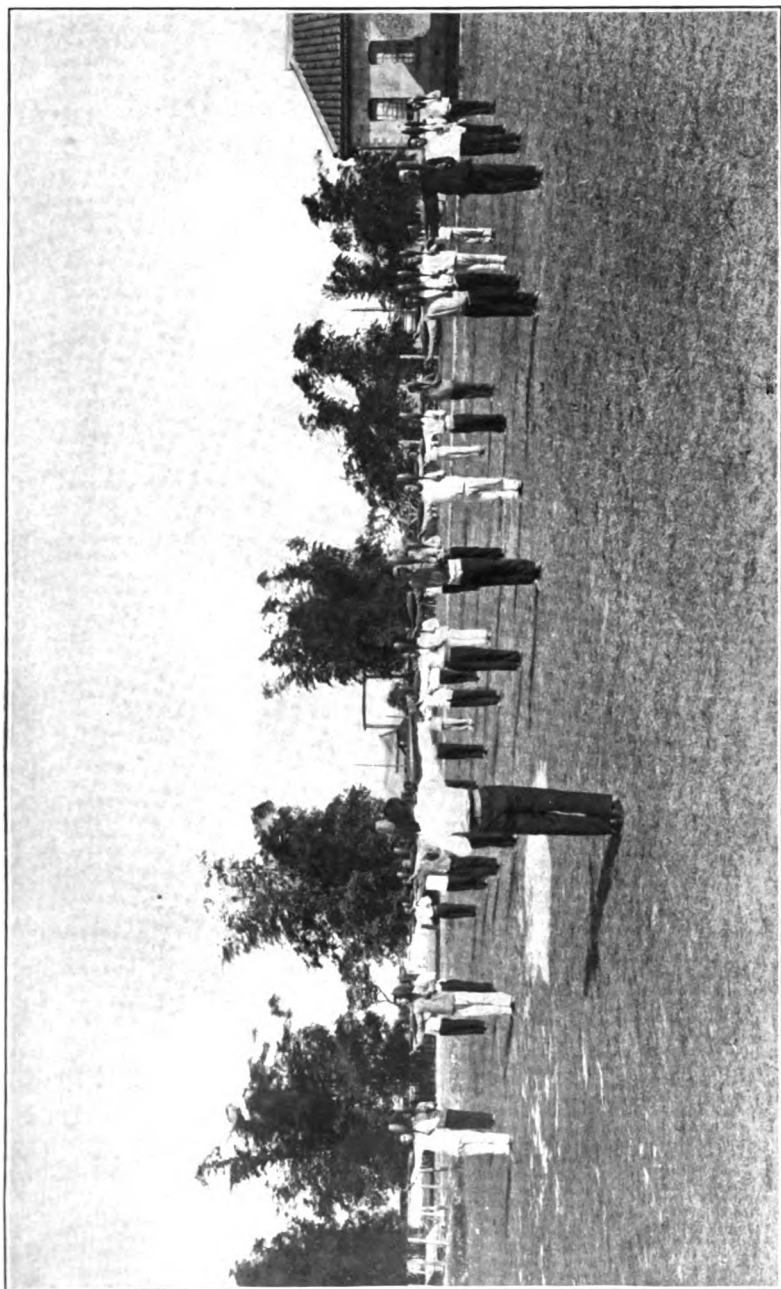
The girls' school.—For the education and industrial training of girls there was established in 1898 at Shirin a school which, for administrative purposes, is dependent upon the Language School. This school is intended solely for the education of girls and provides two courses, namely, course A, for common education; course B, for domestic sciences. Course A requires three years for completion and prescribes the following studies: Morals, Japanese, arithmetic, writing, music, and sewing. Pupils entering this course must be at least 8 years and not over 14 years of age. Course B provides for six years' work and prescribes the following studies: Morals, Japanese, reading, writing, arithmetic, music, sewing, knitting, artificial flower making, and embroidering. Students in this course range from 12 to 18 years of age. There are three Japanese teachers,

one of whom is a woman, and one native Chinese woman teacher. The native teacher instructs the younger pupils in sewing, for which she receives \$3.50 a month. Students are admitted by examination and but a limited number are accepted each year. At present there are 26 pupils enrolled in course A and 24 in course B. Since 1898 there have been enrolled in the school 350 pupils, of whom 50 have been graduated. Of these graduates, 30 are engaged as teachers in the public schools at salaries ranging from \$2.50 to \$5 a month, and the remainder have married and live at home.

The school is at present housed in poor quarters, two of the class rooms having earth floors. But a new building is planned for the school when it is moved to Taihoku, and a proper normal department for the training of women teachers will then be added. The work done by this school is indeed creditable, and when it is removed to more spacious and better equipped quarters it may be expected to fill a prominent position among the schools for the education of the natives.

The Medical School.—When the Medical School was opened eight years ago the instructors were obliged to go among the Chinese and labor to secure students, and, in spite of the fact that the Government provided free schooling and a liberal allowance to cover the students' living expenses, their efforts were not at first crowned with much success. But when a few students were graduated and the parents discovered the splendid opportunities that a medical training offered for liberal financial returns, they were no longer hesitant about sending their children to the school. There are in Formosa 1,700 native Chinese physicians practicing according to old Chinese methods. The object of the Medical School is to replace these by trained physicians. The demand for the trained native physician is indeed good if we are to judge from the money compensation which the graduates of the Medical School now receive. The graduates, numbering 75, earn from \$25 to \$150 a month each. The wage of the Chinese laborer in the island averages \$6 a month. In face of the splendid incomes of these graduates, it is no little wonder that the money-loving Chinaman is anxious to have his son become an M. D.

The Medical School accommodates but 35 new students a year. Although the regulations of the school provide that the students' entire living expenses and tuition are to be defrayed by the institution, yet of the 300 applicants for admission at the beginning of the present year 30 offered to pay their own expenses. So long as the regulations remain as they are, admission will be determined entirely upon the basis of competitive examinations. Of the 158 students at present enrolled in the school, 10 pay their own way, while on the other hand there are a number who entered without a penny to their credit.



A CLASS IN PHYSICAL CULTURE IN THE NORMAL DEPARTMENT OF THE LANGUAGE SCHOOL FOR CHINESE NATIVES.



A CLASS IN READING IN THE SHIRIN GIRLS' SCHOOL.

To take the examination one must have the equivalent of five years' training in the public schools.

The Medical School is conducted in connection with a Japanese Red Cross Hospital which was established in the capital city several years ago. At that time the Red Cross Society contributed \$25,000 for the erection of a building and \$2,500 a year for its maintenance, provided that the hospital would be conducted in connection with the medical training school. The Government has since taken the matter up, and is now erecting in the vicinity of this hospital buildings which, when completed, will have cost \$150,000. The Government sanitary bureau is also erecting in proximity to the Medical School and hospital, at a cost of \$150,000, a laboratory which, when completed, will undoubtedly be the best of its kind in the East. Besides these institutions, there is a Government hospital directly opposite the Red Cross Hospital. This building is being completed in sections, and when entirely finished will have cost about \$250,000. Hence the island is being furnished with splendid facilities for a medical education.

The school provides two courses, a preparatory and a regular course. The preparatory course covers one year and embraces the following subjects: Morals, Japanese, natural science, geography, history, arithmetic, and gymnastics. The regular course presupposes the satisfactory completion of the preliminary course and prescribes a course of study extending over four years. While this course does not presume to be of as high a standard as that which obtains in medical schools in Japan, yet it is, so far as circumstances will permit, fashioned after such. A post-graduate course of one year is offered and all are encouraged to take it. Patients in the hospital are treated free of charge, which affords advanced students practical work under competent instructors. There are two wards, each of which accommodates about 40 patients. Chinese and Japanese men and women occupy the same wards. The writer was surprised to note that about one-third of the students had cut their queues because they had found them to be in the way.

Upon a student's graduation he is presented with a certificate signed by the governor-general permitting him to practice medicine in the island. No one is permitted to practice here without a certificate from the Formosan government, although a certain proviso was made when the Japanese took possession of the island whereby 1,700 native physicians were granted privilege to continue their practice under certain limitations. When the new buildings are completed the school will be able to graduate 60 students a year. The number at present is 25. Of the 73 students already graduated, 43 have taken the post-graduate course, involving a training in the hospital. When the graduate begins the practice of medicine he is obliged to serve a

probationary period of several years, during which time he is watched closely by the Medical School authorities and every possible assistance rendered him. The institution is doing a splendid work and deserves high commendation.

The Agricultural School.—Formosa is and undoubtedly always will remain an agricultural colony. The soil is rich, rainfall abundant, and climate conducive to vegetation. Up to the time that the island became a possession of Japan nothing was done toward the application of science to agriculture. But now an agricultural experiment station under the supervision of the bureau of productive industries of the Formosan government retains a corps of specialists and does a splendid work toward improving agricultural conditions in the island. This institution is located about 3 miles south of the capital city and covers an area of 58 acres. The station is in charge of a superintendent, assisted by 2 expert teachers, 2 special clerks, 17 regular teachers, 12 regular clerks, and 12 laborers. Three of the teachers hold degrees as bachelors of agriculture from agricultural colleges in Japan.

The station provides a training school for Chinese natives. There are three courses of study offered—agriculture, veterinary science, and forestry. A student to be admitted to these courses must be a member of a family owning $2\frac{1}{2}$ acres of land, and must hold a certificate showing the completion of the fifth-year class of the public school, which means that he must have a working knowledge of the Japanese and Chinese languages. He must be upward of 17 years of age, physically able, and of good character. He must be in a position to be able to attend regularly for two successive years to the work as prescribed in the course of study. Candidates for entrance must make application through the prefect of the district, who is responsible for the examination and certification of the candidates. The course of study in the agricultural department covers two years and embraces the following subjects: Science of agriculture, entomology, pathology, cattle feeding, manual training, and methods of teaching. The students live in dormitories provided for them; food, clothing, and stationery are provided at their own expense, while bedding and mosquito nets are rented to them by the station. During the period of their attendance they receive 10 cents a day as a remuneration for their labor. It is said that a majority of the students are self-supporting, some even doing their own cooking. Their daily programme is something after the following manner: 5.30 a. m. in the summer (6 in the winter), rise; 6, inspection; 6.30, breakfast; forenoon, study; afternoon, practical work; 9 p. m., inspection; 9.30, lights out. Athletic fields are provided the students and a room is set aside for medical attendance, which is furnished free of charge.

For student experimental purposes 1 acre of land is set aside for rice fields, $3\frac{1}{2}$ acres for vegetable and plant gardens, and 1.2 acres for an orchard. Here the students practice cultivation. The habits of harmful insects and methods of extermination are studied. A number of imported cattle are kept at the station, and the feeding and treatment of cattle in general studied.

The practical work is in charge of two teachers, who are reserve commissioned officers in the Japanese army, and the students are kept under military discipline.

Once each year the students are taken on exploring tours for observation and study, and whenever officers from the station go on lecture tours among the farmers in the island, corps of students accompany them to assist in the magic-lantern exhibitions as well as in other ways. Once every week the students assemble together with the officers and teachers of the station, and general discussions upon topics connected with the work are carried on in Japanese. Here the students have an opportunity to practice their Japanese, as they are obliged to speak in turn before the assembly, setting forth the results of their observations and study. In impromptu speaking, and in making an appearance before a public assembly, the Chinese student surpasses the Japanese. On holidays and during spare hours they are encouraged to collect insects.

There are now 84 students admitted to the agricultural school each year. Up to the present 106 students have been graduated from the agricultural course, the majority of whom are engaged in work connected with the station.

The products under experimental cultivation and study in the grounds of this station are rice, sugar cane, peanuts, China grass, jute, indigo, tobacco, tumeric, sesame, peppermint, and silk. A special experimental garden for tea culture is conducted at An-peï-ching, while another for tobacco culture is established at Bioritsu.

Up to the present the station has compiled the following reports:

1. Investigations on the principal farm products of Formosa.
2. Agricultural experiments.
3. Neat cattle in Formosa, with some notes on the Indian buffalo.
4. The Java potato.
5. Elephant-trunk worms which grow on rice.
6. Description of farm implements used in Formosa.
7. Results of experiments in sericulture.
8. The six varieties of harmful rice worms.

Numbers 4, 5, 6, 7, and 8 have been translated into Chinese and distributed among growers.

As a result of the station's experiments in the growing of peppermint in Formosa, a Japanese colony has been founded on the east

coast and the cultivation of this plant undertaken on a large scale. The station is also experimenting in sericulture, and hopes to add the growing of the silk worm to the industries of the island.

The veterinary course is open to students who have completed the agricultural course. Applicants must be of at least 19 years of age and of good health. The course of study extends over six months, and the rules pertaining to students and instruction are similar to those of the agricultural course. At present 16 students are enrolled.

The course in forestry is just being instituted, hence little can be said about the work which it is intended to cover. Formosa is rich in forest products and there is an excellent opportunity for the student of forestry.

The Industrial Sugar School.—Since the island became a Japanese possession much has been done by the administration to improve and extend the cane-sugar industry. At present about 20 per cent of Japan's consumption of sugar is furnished by Formosa. Improved sugar cane has been introduced from Hawaii and Java, and modern crushing mills are being erected. This industry furnishes an excellent opportunity for the operation of industrial schools in connection with it. The administration has not overlooked this fact. Under the supervision of a Government sugar bureau there was opened in February, 1905, an industrial sugar school in connection with an experiment station for the training of apprentices for work in sugar mills. In July, 1906, the Industrial Sugar School and the analytical and experiment stations were consolidated in an experimental department of the sugar bureau.

In this department native and Japanese students are trained as apprentices. Those who are admitted to the school are expected to have had an elementary education. In this school there are two departments, a sugar manufacturing department and a sugar engineering department. The students in the engineering department number 15, while those in the manufacturing department number 26. The branches of study include agriculture, physics, chemistry, arithmetic, national language, engineering, sugar manufacture, analysis of sugar, management of stationary engines, implement manufacture, management of sugar machinery, and the cultivation of sugar. The number of hours per week devoted to each subject is given in Table 7. The course is the same for both departments during the first year, but in the second special courses are given. At present no suitable text-books have been found for the use of the pupils, hence the instructors are obliged to have them take notes from lectures each day.

TABLE 7.—*Number of hours per week allotted to each subject at the Industrial Sugar School.*

COURSE IN SUGAR MANUFACTURE.

Subject.	First year.			Second year.		
	First period.	Second period.	Third period.	First period.	Second period.	Third period.
Agriculture	3	3	3	5	5	.....
Physics	4	4	4	.....	.....	.....
Chemistry	4	4	4	4	.....	.....
Arithmetic	5	5	5	3	3	3
Japanese	4	4	4	.....	.....	.....
Sugar manufacturing .....	.....	.....	3	.....	.....	3
Sugar analysis .....	.....	.....	.....	16	16	16
Cultivation of sugar .....	.....	.....	4	.....	2	2
Total	20	20	27	28	26	24

ENGINEERING COURSE.

Agriculture	3	3	3	.....	.....	.....
Physics	4	4	4	.....	.....	.....
Chemistry	4	4	4	.....	.....	.....
Arithmetic	5	5	5	3	3	3
Japanese	4	4	4	.....	.....	.....
Engineering	3	3	.....	.....	5	5
Boiler and engine management .....	.....	.....	.....	18	.....	8
Manufacture of implements .....	.....	.....	9	.....	9	9
Management of sugar machinery .....	.....	.....	.....	18	9	.....
Total	23	23	29	39	26	26

Prior to the opening of a sugar mill by the station, student apprentices in both courses were engaged in the cultivation of cane each day from 1 to 5 p. m. (Saturdays and Sundays excepted); but when the sugar plant was installed, students in the engineering course were assigned as assistants in the installation and operation of machinery, while those in the manufacturing course were assigned to work on the analysis and manufacture of sugar. Their work is carried on under the guidance of competent teachers, who take the students on inspection tours to native and improved mills. Recently the entire corps of students has been engaged in work in one of the large modern mills under the supervision of an instructor, and this has proved very beneficial to them.

(c) PRIVATE SCHOOLS FOR CHINESE NATIVES.

During the Chinese régime the Chinese youth had for the most part to depend upon private schools for his instruction. The part which these schools played in the educational system during that period is fully set forth in the previous section on "Education under the Chinese." The independent position occupied by the private schools prevented them from being affected by the coming of the Japanese, and up to the year 1898 they occupied much the same position with the native masses as before. In that year, when the public school system was formally established, certain regulations were

made to bring the private schools under Government control and supervision. As long as a complete system of public schools was not established throughout the island the administration deemed it wisest to permit the private schools to continue, but, if possible, to place them under such supervision and control as might result in eventually bringing them up to a standard approaching that of the public schools.

The important position still occupied by the private schools is attested by the fact that, during the year 1906, 20,142 native pupils were under instruction in them. These figures as compared with those for the year 1901 show a decrease of 8,000, but still represent a number equivalent to about two-thirds of the enrollment in the public schools. On the other hand, compared with the figures for the year 1905 there is a slight increase. In 1906 there were 936 teachers in the private schools as compared with 1,543 in 1901.

The regulations pertaining to Chinese private schools prescribe that such schools shall be under the supervision of the respective local prefects; that the course of study as prescribed under the old procedure shall be gradually altered so as to include the Japanese language and arithmetic; that reports shall be made each year to the office of the prefect setting forth full particulars as to the work of the school, student enrollment, and other matters; and that certain sanitary precautions shall be observed. The governor-general may prescribe the use of such text-books as he may deem necessary, and in cases in which the schools are properly managed certain subsidies may be granted by the administration. In obedience to the above regulations, by the year 1906 arithmetic had been introduced into 187 private schools, Japanese into 112, and both arithmetic and Japanese into 80. A regulation more recent than these prescribes that private schools shall cease to be conducted in districts in which public schools are established. There were 927 private schools in operation during the year 1906.

These figures tend to show that the private school is still popular with the Chinese. A parent may send his children to such a school upon payment of about \$5 a year for tuition, which is all he need pay toward the support of the school. The average native private school makes provision for about twenty pupils. As each child is a class unto himself, the parent can withdraw him from the school at any time and for as many days as he may please without interfering with his work. Furthermore, the pupil may give the bulk of his time to the study of Chinese in accordance with the wishes of the native parent.

But for all this the native private school has little to commend it. It is housed in poorly lighted, poorly ventilated quarters, and under the instruction of poorly trained teachers. The best that can be said

for it is that it is distinctly Chinese, and naturally in favor on that account with those who criticise the public school as teaching too much Japanese and too little Chinese. As the establishment of public schools means the displacing of the private schools, it will undoubtedly not be many years before the native private school will no longer find a place in the educational system of the island.

6. SCHOOLS FOR THE JAPANESE.

The Japanese in Formosa number less than 2 per cent of the island's population. That comparatively few Japanese have settled in Formosa can not be imputed to a lack of educational facilities. The 3,850 children of school age are being well cared for; in fact, the schools provided for them are in many respects superior to corresponding institutions in Japan. The system conforms to that of the mother country and consists of elementary and secondary schools.

(a) ELEMENTARY SCHOOLS.

That 93 per cent of the Japanese children of school age in Formosa are under instruction is due, in part at least, to the fact that elementary education is with them compulsory. Elementary schools are established throughout those portions of the island inhabited by the Japanese and are under the supervision of the local prefects, as are the public schools for the Chinese natives; the expenses of maintenance are defrayed from the prefectural treasuries, although a tuition fee of 15 cents a month for the primary and 25 cents a month for the intermediate course is assessed against each pupil enrolled. The total amount of such tuition fees during the year 1906 was about \$5,000. The expenditures for the maintenance of these elementary schools during the same year amounted to about \$35,000, which sum includes an item of \$5,000 for buildings. In districts in which the Japanese population is so sparse as not to warrant the establishment of elementary Japanese schools, arrangements are made whereby separate classes for the instruction of Japanese children are provided in the public schools for the Chinese. During the year 1906 fourteen native Chinese schools were giving special courses for Japanese pupils, the 221 pupils in these schools paying the regular tuition fee.

The smallest regular elementary Japanese school in the island is that at Toen, which provides for 41 pupils. The largest is the Taihoku City School, which has an enrollment of about 700 pupils. The Taihoku school cares for nearly one-fourth of the pupils in the elementary Japanese schools, and is a model institution. The buildings were erected at a cost of \$40,000 and are remarkably well adapted to school purposes, in addition to being distinctly ornamental. Like all schools erected by the Japanese authorities in the island, the buildings

are so arranged that each room occupies the entire width of the building, thus providing excellent lighting and ventilating facilities. There are ten class rooms, a large assembly room, a sewing room for girls, a room for scientific apparatus and natural history specimens, and proper office accommodations for principal and teachers. The grounds are spacious enough to provide flower gardens, playgrounds, and athletic fields. The site was well chosen, being the most favorable location in the outskirts of the capital city. There is not in the whole of Japan an elementary school of a similar size as well housed as is this.

The teachers in the elementary Japanese schools of Formosa receive much higher pay than those in similar schools in Japan. The average monthly salary of the Japanese elementary school teacher in Formosa is \$25, while that of the teacher in Japan is less than one-third of this amount. Women teachers are paid less. Owing to the splendid inducements in the way of good salaries, the educational authorities in the island experience no difficulty in securing excellent material as teachers in the elementary Japanese schools. In Japan the salaries of the elementary school teachers depend very often upon each annual budget in a school district, and, if the district is poor, the teacher is often obliged to suffer a reduction in his allowance. The teacher in the elementary Japanese schools in Formosa is not thus inconvenienced. For the most part, the lower grades in these elementary schools are taught by women, who receive an average salary of about \$8 a month.

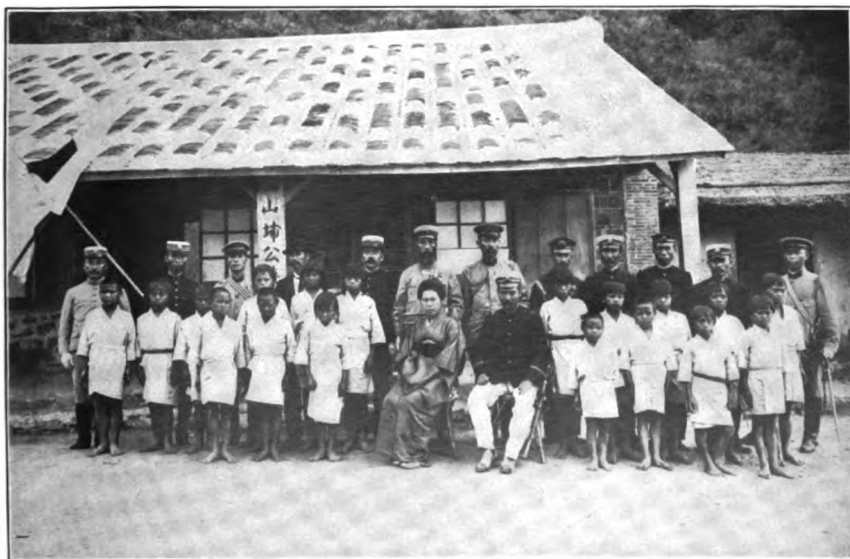
The course of study prescribed for the elementary Japanese schools in Formosa is similar to that for schools in Japan. It is quite necessary that it should be thus, for a large number of children are constantly returning to or coming from Japan, and naturally wish to continue their schooling with as little inconvenience to themselves as possible. Furthermore, graduates of elementary Japanese schools in the island are received in Japan on an equal standing with the graduates of the elementary schools there. As in Japan, the elementary gives a primary course of four years and an intermediate course of two years. In the primary course morals, Japanese, arithmetic, music, and physical culture are taught, with sewing lessons added for girls. In the intermediate course Japanese history and geography, natural science, and drawing are taught in addition to the subjects already enumerated. The text-books used are similar to those in use in Japan. These, however, are to be supplemented by books especially adapted to Formosa.

Children are admitted to the elementary Japanese schools between the ages of 6 and 14 years. There were 3,064 pupils enrolled in these schools during the year 1906, about one-half of whom were girls. Fourteen native Chinese schools were, during that year, giving



A. TAIHOKU CITY ELEMENTARY SCHOOL FOR JAPANESE.

This is a model institution.



**B. TEACHERS AND PUPILS OF THE ENZANNO PUBLIC SCHOOL
FOR ABORIGINES, IN KOSHIN PREFECTURE.**

special courses for Japanese children, who numbered 115 boys and 106 girls. The average daily attendance of pupils enrolled in the elementary Japanese schools during 1906 was 2,763. When a school is sufficiently large to permit, boys and girls are taught in separate classes.

One of the particularly interesting features of the Japanese school is the system of class captains, who are selected, one for each class, on a basis of scholarship. When a visitor enters a class room, the class captain rises from his seat, calls the class to attention, and the members in obedience to his orders rise and, as one person, salute the visitor. When the class is to be dismissed, it is done at the orders of its captain, who assembles them on the school grounds in company formation and, when they are at attention, gives the command "fall out." Likewise when the school session is called the boys fall in under their respective class captains and march to their class rooms. Physical culture in the Japanese school involves considerable military drill, which, whenever the weather will permit, is carried on out of doors. The Japanese pupil in Formosa demands more recreation and play than he would were he in a school in Japan, for climatic conditions in the island are conducive to fevers and epidemics. Moreover, the pupil in Formosa finds that he can not study so effectively as he could in Japan, hence he must have more exercise and recreation to keep in good physical condition.

Another disadvantage to the Japanese child in Formosa is the inferior social conditions which surround him. The first Japanese to come to the island were not from the better classes and their moral standards were not high, hence the children of the better classes are often thrown among evil associates. The educational department is doing everything possible to counteract these unfavorable conditions, and, so far as the elementary schools are concerned, the Japanese pupil is receiving excellent care from the educational authorities in the island.

(b) SECONDARY SCHOOLS.

The facilities furnished the Japanese student for secondary education are quite equal, in point of excellence, to those for elementary training. After completing his six years of primary and intermediate school training, the Japanese boy who would remain in Formosa has the choice of entering the Middle School or the normal department of the Language School. For the girls there is a girls' high school.

The Middle School.—A 15-acre piece of ground has been secured by the Formosan government in proximity to Taihoku City for the erection of buildings and dormitories for a new middle school for the Japanese. The completion of these buildings will involve an ex-

penditure of \$250,000 and will give to the island a middle school superior to any in Japan. The cost of this project will be defrayed from the government treasury. The school is at present housed in temporary quarters in the city. The students, who number 104, are required to pay a tuition fee of 80 cents a month. The school provides two departments, which may be styled A and B.

Department A makes English the major subject and proposes to train a limited number of students in English manners, customs, and ways of living, besides affording to them an academic training. Baron Goto, late civil governor in the island, who is responsible for the founding of this department, said that it was his purpose in recommending such a course to afford a means whereby Japanese boys may be so thoroughly trained in the English language, manners, and customs as to be able, at the completion of their studies, to move about in foreign society with ease and comfort; in a word, to produce Japanese gentlemen conversant with foreign customs. This course is a noteworthy innovation in Japanese methods of training students in a foreign language and foreign customs, there being nothing to correspond with it in Japan, with the possible exception of a private institution in Tokyo under foreign management. In light of the many criticisms which have during the past six months appeared throughout the Japanese press on the superficial methods of foreign-language instruction in the middle schools of Japan, this experiment in Formosa will undoubtedly be watched with the closest attention by Japanese educationists.

The number of students in this course to enter each year is limited to 30, who are to be selected by competitive examination. Applicants must be at least 11 years of age, must have a training equal to that given in the elementary Japanese schools, and must be able to defray their living expenses in a dormitory provided in the school. These expenses, from a Japanese standpoint, are high, being at least \$15 a month. Students are required to live and dress in foreign style. The course will extend over six years, and it is planned to have a separate dormitory for each class, which is to be composed of 30 members. Each dormitory will be presided over by the head teacher of the corresponding class or form. The first class of 30 students was admitted this year, but dormitory accommodations for them will not be in readiness until next April. The course of study includes Japanese, English, Chinese, history, geography, mathematics, natural history, physics, chemistry, drawing, music, manual training, and gymnastics. The number of hours per week devoted to each subject is given in Table 8.

TABLE 8.—*Middle School study schedule—Department A.*

FIRST TERM (3 YEARS).

Subject.	First year.		Second year.		Third year.	
	Division of the subject.	Hours per week.	Division of the subject.	Hours per week.	Division of the subject.	Hours per week.
National patriotism.	Requirements of the nation.	1	Same as first year.	1	Same as first year.	1
Japanese	Reading, composition, conversation, and writing.	4	.....do.....	4	Grammar added..	4
English.....	Easy conversation, pronunciation, spelling, and writing.	9	Translation and grammar added.	7	Same as second year.	7
Mathematics	Arithmetic	4	Algebra added....	4	Arithmetic, algebra, and geometry.	4
History	Historical tales.....	1	Japanese history..	2	Same as second year.	2
Geography	Elements.....	1	Japan and east Asia.	2	West Asia and Japan.	2
Natural history.....	.....do.....	1	Plants, animals, and minerals.	1	Same as second year.	2
Total .....	.....	21	.....	21	.....	22

SECOND TERM (3 YEARS).

Subject.	Fourth year.		Fifth year.		Sixth year.	
	Division of the subject.	Hours per week.	Division of the subject.	Hours per week.	Division of the subject.	Hours per week.
National patriotism.	Same as first year.....	1	Political science...	1	Same as fifth year.	2
Japanese	Same as third year...	3	Same as third year.	3	Same as third year.	3
English.....	Translation, paraphrase, conversation, composition, and grammar.	5	Same as fourth year.	5	Same as fourth year.	5
Chinese	Same as English.....	5	.....do.....	5	.....do.....	3
Mathematics	Algebra and geometry.	4	.....do.....	4	Trigonometry added.	4
History	Oriental	2	Western	2	Universal.....	2
Geography	World	1	Geology	1	Physical geography.	2
Natural history.....	.....	2	Physiology	2	.....	.....
Chemistry and physics.	.....	2	.....	2	.....	4
Total .....	.....	25	.....	25	.....	25

An advanced course covering two years will be provided for graduates. This latter course is designed especially to fit young men for positions in the Government service, particularly the colonial service. In speaking with Mr. Hoinjo, the principal of the Middle School, the writer was informed that the new Middle School is to be patterned, to a certain extent at least, after Abbott's Hall, England, which he had occasion to visit a year ago. The Middle School retains at present two foreigners as teachers of English, one a Cana-

dian woman and the other an American, the former of whom is to have charge of the dormitories to be opened next April.

Department B, which is in reality the Middle School proper, requires five years for its completion, and corresponds to the regular middle schools in Japan. The students registered in this department do not live in dormitories. The course of study includes morals, Japanese, Chinese, English, history, geography, mathematics, natural history, physics, chemistry, elements of law and economics, drawing, music, and gymnastics. The number of hours allotted to each subject is shown in Table 9. An advanced course covering one year supplements the one just described. Military drill forms an important feature of the prescribed work for the students of both departments of the Middle School, and is conducted under the direction of a former army officer.

TABLE 9.—Middle School study schedule—Department B.

Subject.	First year.		Second year.		Third year.	
	Division of the subject.	Hours a week.	Division of the subject.	Hours a week.	Division of the subject.	Hours a week.
Morals.....		1		1		1
Japanese and Chinese.....	Reading, grammar, composition, and writing.	7	Same as first year.	7	Same as first year.	7
English.....	Elementary.....	6	do.....	6	Grammar added.....	7
History and geography.....	Japan.....	3	Asia and Australia added.....	3	Oriental history and European geography.....	3
Mathematics.....	Arithmetic.....	4	Algebra added.....	4	Geometry added.....	5
Natural history.....	Minerals.....	2	Botany.....	2	Physiology, zoology, and sanitation.....	2
Drawing.....	Free-hand.....	1	Mechanical added.....	1	Free-hand.....	1
Music.....	Singing.....	1	Same as first year.....	1	Same as first year.....	1
Gymnastics.....	Military.....	3	do.....	3	do.....	3
Total.....		28		28		30

Subject.	Fourth year.		Fifth year.	
	Division of the subject.	Hours a week.	Division of the subject.	Hours a week.
Morals.....		1		1
Japanese and Chinese.....	Advanced work.....	6	Same as fourth year.....	6
English.....	Same as third year.....	7	Same as third year.....	7
History and geography.....	America and Africa.....	3	Universal history and geology.....	3
Mathematics.....	Algebra and geometry.....	4	Geometry and trigonometry.....	4
Natural history.....	Zoology.....	2		
Physical sciences.....	Chemistry.....	3	Physics.....	4
Law and political economy.....				2
Drawing.....	Mechanical.....	1		
Military drill.....		3		3
Total.....		30		30

The officers of the Middle School consist of 1 principal (Shonin rank), 7 teachers of Shonin rank and 17 of Hannin rank, a superintendent of dormitories, and a clerk. The foreign English teachers

receive \$900 and \$1,800, respectively. Living quarters are furnished to all of the above teachers. The school has not been established sufficiently long to graduate many students, but during the year 1906 19 were graduated.

The normal department.—There is connected with the Language School a separate normal department for the training of Japanese young men as teachers for the public schools. Students to be accepted in this course must be at least 18 and not over 25 years of age, and must have completed a course of study equal to that of the fourth year of the Middle School. The course of study extends over one year and includes the following subjects: Morals, pedagogy, Japanese, Formosan Chinese, history, geography, natural science, music, manual training, agriculture, commerce, and physical culture. Manual training, agriculture, and commerce occupy but a small part of the study schedule. This department graduates about twenty students a year, and since its establishment about ten years ago it has furnished 145 teachers for the public schools of the island.

The Girls' Higher School.—There are more girls in attendance in the elementary Japanese schools, in proportion to the number of school age, than there are boys. Girls to be admitted to the Higher School must be not less than 12 years of age and must have had an elementary school education. The course of study prescribed for this institution is similar to that which obtains in like schools in Japan. The admirable feature of its curriculum is that it attaches great importance to the domestic sciences. Graduates from this school are received in Japan on the same status as graduates of Girls' Higher Schools there. There were 149 girls enrolled in this school during the year 1906, which was 64 less than the number of boys enrolled in the Middle School, and 125 more than the number of native Chinese girls enrolled in the Shirin Girls' Higher School.

Japanese students completing the courses prescribed in the secondary schools above enumerated are in a position to enter upon advanced work in schools in Japan. The facilities which the Formosan government offers to the Japanese youth for a first-class common-school education are indeed good, and when the new middle school is completed the island will have a high school superior to any in Japan.

7. SCHOOLS FOR ABORIGINES.

The savage tribes in Formosa still occupy and control the eastern (mountainous) half of the island. Their population is estimated at 103,000. The question of bringing this population under control and opening their lands to exploitation is one which is receiving much attention from the administration. A military police force, made up of 3,500 Japanese police, 1,500 Chinese native police, and 5,000 native

coolies, has succeeded, under the direction of the superintendent of police, in establishing a guard line along the savage frontier. This line has been advanced from time to time, but recently it was forced back by a combined attack on the part of the savages in the northern part of the island and much territory regained to savage control. The difficulties with which the police have to contend are many. The country is mountainous and covered with a dense jungle well adapted to the sort of guerrilla warfare which the savages indulge in.

The tribes in the northern part of the island belong to the Atayal group of head-hunter savages and are the most difficult with which to deal, while the Amis, Paiwan, and Payuma groups in the eastern and southern districts are comparatively peaceful. It is among these latter groups that the administration is attempting to establish schools. Up to the present twelve schools have been opened in Taito prefecture in villages along the east coast and three in Koshun in the southernmost part of the island. It is worthy of note that these schools have been established in the same villages and among the same tribes as those opened by Chinese thirty-five years ago. In fact, as a result of the work of the Chinese school in one of the villages in Koshun, many of the members of one of the tribes of the Paiwan group still wear the queue and dress in Chinese style.

The regulations provide that no tuition fees shall be charged in the savage schools. The expenses of maintenance are defrayed from the prefectural treasuries. During the year 1906 the sum of \$12,000 was spent on savage education. The course of study extends over four years, and aims to teach the children to read and write the Japanese kanna (alphabet) and perform the simple operations in arithmetic. Their course of study naturally includes much conversational work in Japanese. Music, manual training, and agriculture are added as local conditions permit. The pupils are rewarded for faithful work by prizes consisting of clothing and food. The teachers assigned to these schools number 40, of whom 25 are Japanese, 8 Chinese natives, and 7 savages. They are paid \$272 a year for the Japanese, \$44 a year for the Chinese native, and \$35 a year for the savage teachers. The Japanese teacher in a savage village is recognized by the members of the tribe in that place as an important personage. He has succeeded in winning the good will of the chieftain and headmen, for many instances are cited of these chieftains and headmen calling upon the village school-teacher to act as arbiter in their controversies.

There were 996 boys and 92 girls enrolled in the fifteen savage schools during the year 1906. Of these pupils, 167 were between the ages of 7 and 10 years; 565 between the ages of 10 and 15; 280 between the ages of 15 and 20; 29 upward of 20 years, and 43 of ages unknown. The average daily attendance during the year was 577

for the boys and 56 for the girls. The low average daily attendance is probably due to the fact that, owing to the poverty of these tribes, they are obliged to utilize the services of their children as much as possible in the fields which they till. These schools have thus far graduated 47 boys and 1 girl. One of the graduates subsequently entered the medical school in Taihoku City and did very creditable work. The other graduates are employed as interpreters and police in the districts in which they live.

These tribes prove themselves capable of being affected by civilizing influences. The children make good progress in their studies, but appear to be lacking in mathematical ability. The parents seem to be anxious to have their children learn to read and write. Indications at present seem to point to a successful issue in the educational work among these tribes.

8. EDUCATION UNDER THE JAPANESE CONTRASTED WITH THAT UNDER THE DUTCH AND CHINESE.

In contrasting education under the Japanese with that under the Dutch and that under the Chinese we should measure each in light of its peculiar aims and accomplishments.

The Dutch aimed to convert to Christianity the savage tribes among whom they settled, hoping thereby to better their trade relations. Their missionaries came to Formosa and found a people (or peoples) savage and addicted to vile practices. As a result of the thirty years' labors of these missionaries the savage tribes were given a written language and improved social customs, which were carried down through successive generations, remnants of which are to be found even to the present day. Measured in the light of their day or, in fact, in the light of to-day, the achievements of the Dutch missionaries can not be judged otherwise than as remarkable.

Education during the Chinese régime in Formosa naturally followed the trend of education in China proper. The Imperial examinations dragged all that flavored of educational effort through the same ruts year after year until one administrative officer, bolder and more enlightened than his predecessors, attempted to lift it upon a higher plane—that of usefulness—only to have his work so well begun suffer at the hands of a reactionary successor. But so far as the masses were concerned the private school met their wants, which fortunately were few.

The really interesting phase in educational effort under the Chinese was that which had to do with the establishment of schools among the aborigines. As early as the beginning of the eighteenth century the Chinese recognized the utility of the public school in Formosa as a means of bringing an alien race under subjugation. The schools

established among the tribes which had previously come under the influence of the Dutch assisted to hasten the adoption of Chinese customs by these tribes. It was not, however, till 1875 that the Chinese seriously attempted to subjugate any of the untamed savages through the medium of the public school. When, in that year, special textbooks for the instruction of the savages were adopted, it appeared as if the Chinese had begun to realize the fact that the Three Character Classic was doubly meaningless when placed in the hands of a savage child. But such was not the case; for, ten years later, when the enlightened Liu Ming Chuan attempted to subjugate the tribes of the headhunter Atayal Group of savages by giving them schools, he adhered to the old custom and prescribed the Chinese Classic. Despite the apparent crudeness of their methods, the fact remains that the Chinese had accomplished, during the years 1875 to 1891, much in the way of assimilating the savage tribes throughout the island.

The fact that when Japan took possession of Formosa she found but the fragments of an antiquated Chinese school system, should not be interpreted to mean that had China continued in the possession of the island that system would have been perpetuated. The educational revolution which has swept over China during the past few years could not but have affected Formosa.

When Japan annexed Formosa she already had the advantage of twenty-five years' experience in modern educational administration. Before the island had been pacified she set to work to establish a system of public instruction. Now after twelve years' labors we find 5.5 per cent of the native Chinese children of school age enrolled in public schools, or about 9 per cent under instruction in both public and private schools. Statistics of education in the Philippines for the year 1906 show 20 per cent of the children of school age enrolled in public schools, and about 25 per cent under instruction in both public and private schools.

Public instruction in Formosa aims to convert the native child into a loyal Japanese subject. It attempts, however, to reach only that part of the native Chinese which is able to contribute toward the financial support of the schools. The people are given schools as they are able to pay for them. But when a district gets a school, it is a splendidly constructed, well-equipped building, set upon a site which allows of plenty of room for playgrounds. The teachers provided for these schools are well trained and apparently devoted to their work. Statistics for the years 1900 to 1907 show that the enrollment in the public schools is gradually increasing. (See Tables 10 and 11, pages 63, 64.)

The facilities for the secondary education of the native Chinese are apparently insufficient. A Chinese parent, a man who pays in taxes several hundred dollars a year toward the support of the public ele-

mentary school in his district, when asked why he did not send his boy to it, said, "What's the use? If I send him to the public school he learns Japanese, and when he has finished what use is it to him? His chances of entering a higher school are very few." Those secondary institutions which are provided are good, and so soon as they are in a position to accommodate much larger numbers than possible under the present conditions, they will assist greatly in the cause of native Chinese education.

The public schools established by the Japanese are doing infinitely more for the native Chinese girl than any Chinese school ever attempted to do. But the number of native girls in attendance in the public schools in proportion to the population is still exceedingly low. The Chinese parent is only beginning to give to his daughter the opportunities which a few years ago he deemed appropriate for his son only.

The administration has not neglected to furnish to the Japanese children resident in the island splendid facilities for both elementary and secondary education. Ninety-three per cent of the Japanese children of school age in Formosa are under instruction. The schools and the instruction provided are, on an average, better than those furnished in Japan. As for secondary education, the new middle school will eclipse anything of a like nature in the mother country, and will afford the graduates of the elementary schools splendid facilities for advanced education.

As regards the aborigines, schools are being provided for the children of the peaceful tribes only. According to the policy of the administration, subjugation must precede education. This is perhaps the safest policy. The savage problem in Formosa is one which presents great difficulties, and it will undoubtedly be some years before the administration will have succeeded in placing the savage tribes under control.

Thus it may be said for education under the Japanese that the quality of the facilities furnished is excellent. It may, however, be criticised in that it does not pretend to reach the native masses. The Emperor's decree of 1871 in regard to education does apply to the Japanese resident in the island, but it can not yet be said that it is intended to embrace the native Chinese population. To convert 3,000,000 Chinese into loyal Japanese subjects—in a word, to "Japanize" them, is indeed an ambitious aim. Formosa's proximity to China and the overwhelming preponderance of Chinese in the island are factors which, combined with the strong racial characteristics of the Chinese, make one hesitate to express a favorable opinion upon the subject. The Japanese in official positions in the island are by no means unanimous in an assertion of Japan's ability to Japanize

the natives. It is a question which time alone can answer. In the meanwhile, other nations will watch with interest Japan's labors in that direction.

Expenditure for education for the year 1906.

FOR THE LANGUAGE SCHOOL, INCLUDING THE EXPENSES OF THE MIDDLE SCHOOL, THE SCHOOL FOR NATIVE GIRLS, THE GIRLS' HIGHER SCHOOL, AND TEACHERS' SALARIES IN THE BANKA PUBLIC SCHOOL.

	Yen.
Teachers' salaries.....	52,852.14
Traveling expenses of teachers.....	2,050.75
Foreign teachers (English).....	4,821.33
Students at government expense.....	30,291.07
Expenses of maintenance.....	10,048.07
Repairs.....	3,599.95
Miscellaneous expenses.....	6,963.30
Total.....	110,626.61

ELEMENTARY SCHOOLS FOR JAPANESE.

Teachers' salaries.....	34,492.80
Traveling expenses of teachers.....	1,907.93
Maintenance expenses.....	9,859.36
Repairs.....	4,305.15
Miscellaneous expenses.....	7,368.91
Total.....	57,934.15

PUBLIC SCHOOLS FOR CHINESE NATIVES.

Teachers' salaries.....	244,752.38
Teachers' travelling expenses.....	12,176.06
Total *.....	256,928.44

PUBLIC SCHOOLS FOR SAVAGES.

Teachers' salaries.....	13,430.45
Travelling expenses of teachers.....	868.90
Maintenance and repairs.....	5,642.20
Miscellaneous expenses.....	3,404.85
Total.....	23,346.40

SUMMARY.

Language school.....	110,626.61
Elementary schools for Japanese.....	57,934.15
Public schools for Chinese natives.....	256,928.44
Public schools for savages.....	23,346.40
Grand total.....	448,835.60

NOTE.—The Japanese yen exchanges at the rate 1 yen = \$0.498 United States gold.

Of the above items, the expenditures for the Language School, which include, besides the Language School proper, the Middle School, the Girls' Higher School, and the Shirin Girls' School, are

* All other expenses are met from the district funds for the purpose.

met from the insular treasury; the expenditures for the elementary schools for Japanese are met from the prefectural treasuries; those for the public schools for Chinese natives are met from local taxes (for teachers' salaries and traveling expenses), revenues from school properties, and contributions; those for the public schools for savages from the prefectural treasuries. Tuition fees in all cases go toward the support of the schools from which they are collected.

It is to be noted that in the items set forth under the head of expenditures for public schools for Chinese natives there are included but the two items, "teachers' salaries" and "teachers' traveling expenses." These items are met from the local prefectural treasuries, while those for the maintenance, repair, and upkeep of the school are defrayed from the local tax assessments and properties belonging to the school.

TABLE 10.—*School statistics for the year 1906.*

Kind of school.	Number of schools.	Teachers.			Pupils.			Pupils entered during the year.			Graduates during the year.		
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Public schools for Chinese natives...	180	681	57	738	27,862	3,961	31,823	12,920	2,149	15,069	519	16	535
Public schools for savages.....	15	40	....	40	996	92	1,088	362	55	417	47	1	48
Banka Public School ^a	1	13	1	14	324	134	458	175	74	249	16	4	20
Shirin Girls' School..	1	1	3	4	....	24	24	....	5	5	....	6	6
Elementary schools for Japanese.....	14	55	29	84	1,684	1,601	3,285	1,074	1,051	2,125	239	252	491
Higher Girls' School, for Japanese.....	1	5	6	11	....	149	149	....	81	81	....	....	....
Middle School, for Japanese.....	1	....	....	....	213	....	213	109	....	109	19	....	19
Language School: Normal department—	....	....	....	....	....	....	....	....	....	....	....	....	....
Chinese natives.....	1	....	....	....	197	....	197	99	....	99	44	....	44
Japanese.....	....	41	....	41	20	....	20	20	....	20	20	....	20
Academic department—	....	....	....	....	....	....	....	....	....	....	....	....	....
Chinese natives.....	....	....	....	....	76	....	76	31	....	31	6	....	6
Miscellaneous schools ^b	13	55	8	63	430	78	508	455	30	485	36	17	53
Private Chinese schools.....	914	916	....	916	19,584	331	19,915	15,214	242	15,456	....	....	....
Total.....	1,141	1,807	104	1,911	51,394	6,370	57,764	30,459	3,687	34,146	963	296	1,259

^a Banka School is in reality a public Chinese school, and the figures given above for this school may well be included in those for public schools for Chinese natives.

^b The item "miscellaneous schools" includes private schools for Japanese, a night school, a special law school (private), and missionary schools.

TABLE 11.—*School statistics for the years 1900 to 1906, inclusive.*

Year.	Num- ber of schools.	Teachers.			Pupils enrolled.		
		Male.	Fe- male.	Total.	Boys.	Girls.	Total.
1900.....	1,624	1,993	42	2,035	40,060	1,906	41,916
1901.....	1,712	2,203	47	2,250	46,386	2,682	49,068
1902.....	1,800	2,337	65	2,402	50,200	3,221	53,421
1903.....	1,550	2,195	71	2,266	48,662	3,481	52,543
1904.....	1,270	1,861	77	1,938	45,095	4,490	49,585
1905.....	1,259	1,892	92	1,984	46,476	5,444	51,920
1906.....	1,140	1,807	104	1,911	51,394	6,370	57,764

Year.	Students entered during year.			Graduates during the year.		
	Boys.	Girls.	Total.	Boys.	Girls.	Total.
1900.....	8,478	1,258	9,736	208	45	253
1901.....	9,040	1,501	10,541	112	38	150
1902.....	12,497	2,012	14,509	451	69	520
1903.....	10,199	2,068	12,257	302	87	389
1904.....	27,133	2,681	29,814	638	237	875
1905.....	25,686	3,261	28,947	737	230	967
1906.....	30,549	3,687	34,146	963	296	1,259

The figures above include all classes of schools entered in Table 10, but do not include the Medical School, the Agricultural School, or the Industrial Sugar School. These are considered separately.

APPENDIX.

MISSIONARY SCHOOLS.

A report upon education in Formosa would be incomplete without a description of the splendid work done by the foreign missionary societies.

(a) THE SPANISH MISSION.

Considering the proximity of Formosa to the Philippine Islands, it is not strange that Spain should have sent her missionaries to the island as early as 1626. From 1626 to 1642 Dominican friars carried on missionary work among the Pepohuans, or peaceful savages of the plains, in the vicinity of Kelung. The field of their labors embraced the country lying within a radius of 20 miles from Kelung. Churches were established in ten different villages, and during the sixteen years which the mission operated in Formosa ten fathers and three brothers of the Dominican order had come to the island. A school was opened on Palm Island, in Kelung Harbor, about the year 1630, and enrolled at one time as many as 400 pupils. This school aimed to teach the savages to read and write their own language in romanized characters, with the object in view of preparing them for work in the church. The educational work of the mission was confined to this one institution.

During the year 1642 the Dutch drove the Spanish from the island, and it was not until the year 1710 that any of the Spanish missionaries returned. During that year Father Manilla visited North Formosa, and reported finding one of the descendants of the Pepohuans, who had come under the influence of the Spanish mission prior to the year 1642, who was able to read and write the romanized native language. It was not, however, until the year 1850 that the Spanish mission was reestablished in Formosa. By that time all vestiges of the labors of their early missionaries had been entirely obliterated. During the year 1850 two Dominican fathers settled at Takao, South Formosa, and opened there a church and school.

Up to the present churches have been established in 20 villages throughout the island. Twelve Dominican fathers are in charge of these churches. At Cheng King, in the vicinity of Takao, there was established, in 1894, a girls' school and orphanage, which was placed in charge of a nun who was sent from Manila for that purpose. Since then two more nuns have come from Manila to assist at this girls' school. Chinese girls of poor parents or without parents are cared for in this institution. They are trained as housewives and married to members of the church, or as teachers for the school. There are at present 50 girls in the school. About 10 miles south of Talcu there is a school for the training of young men for positions in the church. This institution has an enrollment of 28 students, and is under the charge of two fathers, assisted by two Chinese teachers. The course of study extends over five years. These two schools are the only educational institutions at present conducted by the Spanish mission.

(b) THE ENGLISH PRESBYTERIAN MISSION.

As for Protestant missions, the English Presbyterian Mission considers South Formosa its field of labor, while the Canadian Presbyterian Mission cares for North Formosa. The English Presbyterian Mission was established in South Formosa during the year 1865. Its native chapels now number about 80. Up to the year 1883 all educational work in this mission was confined to training young men for the ministry. During that year Mr. George Ede came to Formosa to take charge of mission schools. After two years' training in the native Chinese dialect, he opened a school in Tainan, which was named the Tainan High School. In 1894 a special building was provided for the school. It accommodated 50 pupils. This school is at present under the direction of Mr. F. R. Johnson, assisted by three Chinese and one Japanese, who give half their time to the school. Instruction is given in Chinese, history, geography, arithmetic, and Japanese, the latter subject being taught in response to the Formosan government regulations pertaining to private schools under foreign management. English is taught to those only who pay a special fee in addition to the regular fee of \$10 a year. The school has at present an enrollment of 48 resident male students. It accepts graduates of elementary schools provided by the mission. These elementary schools, or "local congregational schools," aim to reach the children of the local congregations. There are at present 10 of these schools. The curriculum provides a six-year course embracing the following subjects: Chinese (reading of the classics), reading and writing of the romanized Chinese, arithmetic, geography, and the Scriptures. Each of these schools has one Chinese teacher, and there are between 300 and 400 children under instruction.

The mission also provides a girls' school, which was established in 1887. It accommodates 50 resident students. At present there are 49 living at the school. The English women connected with the mission have charge, assisted by native women teachers. The curriculum covers the following subjects: Chinese, reading and writing romanized Formosan Chinese, arithmetic, Japanese, history, geography, Scriptures, and domestic science. A Chinese and a Japanese teacher give a few hours a week to teaching in this school.

In addition to the girls' school there is a women's school, where Christian women can live for a year or two for the purpose of receiving instruction in reading the Scriptures. There are at present 10 women living in this institution.

The training of young men for the ministry has received the attention of the mission from the time of its establishment in the island. In 1880 the first building for that purpose was erected. It accommodated 13 students and 1 tutor. During the year 1903 the present building was opened. It accommodates 40 students, but the number in actual attendance averages about 25. This school is under the charge of the Rev. Thomas Barclay, who came to Formosa in 1874 to join the mission. Besides a Chinese tutor, one Chinese and one Japanese teacher give half of their time in teaching in this institution. The curriculum includes the Bible, theology, church history, etc., and arithmetic, Chinese, Japanese, and singing. The course extends over four years. For practical training the students preach each Sunday at stations in proximity to the school. They are allowed \$2.25 a month each to cover their expenses; married students are allowed a trifle more.

There are connected with the mission three hospitals, each of which is under the charge of a foreign physician. These hospitals accept a certain number of native young men for training. Classes are provided for theoretical instruction. Many of the graduates of these hospitals are doing splendid work as practicing physicians among the natives. Now that the Government

authorities permit only the graduates of the Government Medical School to become practitioners, there are fewer openings for the students trained in these hospitals.

For many years the mission has been publishing a monthly paper in romanized Formosan, which circulates among the native members of the church and undoubtedly exerts a beneficent educating influence.

(c) THE CANADIAN PRESBYTERIAN MISSION.

The Canadian Presbyterian Mission established itself in Tamsui, North Formosa; in 1872. It has now, distributed throughout the northern half of the island, 60 chapels with medical dispensaries attached. It maintains, at Tamsui, a school known as Oxford College, where native young men are trained as clergymen. A course of study similar to that prescribed in the Tainan theological school obtains here. In addition to the theological college, the mission also conducts a girls' school and a hospital. It is at present preparing to extend the scope of its educational work by the erection of a building for school purposes in the vicinity of the capital city.

From an educational point of view, the missionary societies in Formosa have been responsible for teaching thousands to read and write their own language, besides affording to many a modern common school education. The British societies have, in addition to their educational work, given to the natives free medical attendance. Now that the Japanese are establishing modern schools and hospitals throughout the island, it would appear that the labors of the missionaries in educational work would be less pronounced in the future than in the past; but, as the public school is at present designed to reach only those who are in a position to pay for its privileges, there is still room for the mission school.

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